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Research Report 1565

# Assessing the Capabilities of Training Simulations: A Method and Simulation Networking (SIMNET) Application

Billy L. Burnside

U.S. Army Research Institute

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**Research Report 1565**

# **Assessing the Capabilities of Training Simulations: A Method and Simulation Networking (SIMNET) Application**

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## FOREWORD


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As a result of resource constraints, the U.S. Army is increasingly relying on devices and simulations to meet its training requirements. Use of these tools to complement traditional training approaches will allow the Army to accomplish effective training at reduced costs. The Army Research Institute for the Behavioral and Social Sciences (ARI) contributes to achievement of this goal by conducting research and development relating to training methods and strategies for new technologies. Within the ARI Field Unit at Fort Knox, the Unit Training Strategies Team works to enhance the effectiveness of training with combined arms simulations. This report describes some of the groundwork for this effort.

The research described in this report is part of the ARI task entitled "Training Requirements for Combined Arms Simulators." This task supports a Memorandum of Agreement entitled "The Effects of Simulators and Other Resources on Training Readiness," signed 16 January 1989. Parties to this agreement are the U.S. Army Training and Doctrine Command (TRADOC), the U.S. Army Armor Center at Fort Knox, the U.S. Army Materiel Command, and ARI.

A key step in developing training strategies is determination of the training requirements that can be met using devices and simulations. This report presents an efficient but comprehensive method for assessing the actions that can be performed in a device or using a simulation and provides a basis for determining the tasks that can be trained. It also provides a detailed example of the application of the method for the Simulation Networking (SIMNET) system. This results in an assessment of the capabilities of an existing combined arms simulation and a method that can be applied to future devices and simulations.

The results of the SIMNET application were provided to the U.S. Army Armor School's Directorate of Training and Doctrine (DOTD) in January 1990. DOTD personnel transmitted these results to TRADOC's Test and Experimentation Command (TEXCOM) to support an ongoing training transfer study using SIMNET as a prototype for a future combined arms simulation. DOTD personnel in the New Systems Training Division are also using the results to revise published guidance on training with SIMNET.

  
EDGAR M. JOHNSON  
Technical Director

# ASSESSING THE CAPABILITIES OF TRAINING SIMULATIONS: A METHOD AND SIMULATION NETWORKING (SIMNET) APPLICATION

## EXECUTIVE SUMMARY

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### Requirement:

Army training managers need efficient means to assess the capabilities of existing devices and simulations in order to determine the tasks that can be trained with them. This research provides a basis for development of training methods and strategies, as well as input for the design of new devices and simulations.

### Procedure:

A rule-based method was developed for assessing the Army Training and Evaluation Program Mission Training Plan (ARTEP MTP) standards that can be met and subtasks and tasks that can be performed in devices and simulations. This method was applied to assess the capabilities of the Simulation Networking (SIMNET) system for platoon, company team, and battalion task force echelons. Extensions of the method were examined in two areas: identification of enhancements needed in simulations and development of collective performance measures.

### Findings:

Application of the method resulted in an efficient comprehensive assessment of SIMNET's capabilities. The results were in general agreement with a previous SIMNET analysis, and they provided a level of detail that was previously unavailable. The method appears to provide a useful approach to assessing the capabilities of devices and simulations. Trial extensions indicated that the method is also useful for identifying enhancements and performance measures needed in simulations.

## Utilization of Findings:

The assessment method provides a basis for determining the training requirements that can be met with existing devices and simulations, along with support for design of new ones. The SIMNET results are being used to support an ongoing training effectiveness and transfer study, as well as revision of guidance for training with the simulation. The method can be applied to identification of key tasks for training effectiveness and transfer of training research. It also provides a means to assess the effects of adding enhancements to devices and simulations in terms of the additional tasks that can be trained. This should provide valuable input to efforts to design effective training devices and simulations.

# ASSESSING THE CAPABILITIES OF TRAINING SIMULATIONS: A METHOD AND SIMULATION NETWORKING (SIMNET) APPLICATION

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**ASSESSING THE CAPABILITIES OF TRAINING SIMULATIONS:  
A METHOD AND SIMULATION NETWORKING (SIMNET) APPLICATION**

**Introduction**

Budgetary constraints are having major impacts on Army training strategies. Traditional training resources, such as fuel, ammunition, and maneuver areas, are becoming scarcer. Currently evolving strategies are based on increased use of devices and simulations, with significant reductions in operating tempo (OPTEMPO), and live-fire requirements. Simply put, training strategies are becoming device-based rather than device-supported (U.S. Army Training and Doctrine Command (TRADOC), 1989).

Developers of device-based training strategies must determine appropriate combinations of full-scale, live-fire training with devices and simulations. This will reduce training costs and allow the most effective use of dwindling field training resources. Key issues in strategy development include determination of training requirements that can be met using devices and simulations, training requirements that must be met using OPTEMPO and ammunition, and approaches to integrating these two general types of resources.

This paper focuses on a method for addressing the first issue listed above. Determining the training requirements that can be met with a particular device or simulation is generally not a simple process. Requirements or design documents describe the features of a device, but they usually do not identify the specific tasks or skills that it will train. Once a device is developed, its training capabilities can be determined through training effectiveness and transfer studies. But the resources available for such studies are generally limited. These studies are often of short duration, using an early production version of the device to train a few relatively simple tasks or skills. This does not provide an adequate assessment of what a device or simulation can train.

How should Army training managers face this dilemma of increasing the use of devices and simulations with only limited data available on what these tools will train? The traditional approach to such a situation is to apply expert judgment. That is, experienced trainers review the capabilities and limitations of a device and estimate the tasks that it will train. While this approach has some value (for example, relatively low cost), it also has some risks. The accuracy and consistency of subjective judgments is questionable (Burnside, 1982). This is especially true when dealing with new devices or simulations for which experience levels are low.

What seems to be needed is an approach for structuring the subjective judgment process to maximize its accuracy and for using the results to guide training effectiveness and transfer studies. The limited resources available for these studies can then be applied where they are most needed. For example, studies should not address tasks which experts agree cannot be trained in the device or simulation. Studies might best address tasks which can be trained to an uncertain degree, in the opinion of experts.

This paper presents a method for meeting the need described above, in the context of a Simulation Networking (SIMNET) application. SIMNET is a complex training simulation, and there have been several attempts to assess the Army Training and Evaluation Program Mission Training Plan (ARTEP MTP) tasks which can be trained with it. One of these was the Armor School's SIMNET Users' Guide (U.S. Army Armor School (USAARMS), 1989), which the present author was directly involved in developing. That document listed in appendixes the armor and mechanized infantry tasks that can be performed to varying degrees in SIMNET, for platoon, company team, and battalion task force echelons.

In November 1989, the USAARMS Directorate of Training and Doctrine (DOTD) asked the present author to perform additional analysis of tasks that can be performed in SIMNET, in response to a TRADOC Test and Experimentation Command (TEXCOM) request. TEXCOM asked that assessments of the degree to which all armor ARTEP MTP standards can be met in SIMNET be accomplished, and that these assessments be consolidated into subtask and task ratings using well-defined decision rules. This effort was designed to support force development test and experimentation (FDT&E), accomplished through a training transfer study which is ongoing as this report is written.

This report presents the results of the SIMNET assessment provided to TEXCOM and documents the method used. It also discusses extensions of the method to meet general needs for assessing the capabilities of training devices and simulations. First, a brief overview of SIMNET and previous attempts to assess its training capabilities is presented.

## Background

### Overview of SIMNET

General Description. The Defense Advanced Research Projects Agency (DARPA) developed SIMNET as a test-bed for linking large numbers of combat simulators within a single site (local area networking) and across geographically-separated sites (long-haul networking). Since the system offers great potential for supporting combined arms training at low cost, DARPA is currently transitioning it to the Army at several sites in the continental

United States and Europe. These include SIMNET-Developmental (SIMNET-D) and SIMNET-Training (SIMNET-T) sites.

SIMNET-D sites provide a few reconfigurable simulators for addressing issues related to new equipment and combat developments. SIMNET-T sites provide simulators to support command, control, and maneuver training for various echelons. This report focuses on SIMNET-T capabilities, but the methods presented have potential application with SIMNET-D. Discussion in this report thus addresses the entire SIMNET system, unless otherwise indicated.

A number of documents have described SIMNET in detail, including operators' guides (e.g., USAARMS, 1987), users' guides (e.g., USAARMS, 1989), and standing operating procedures (e.g., Perceptronics, 1988). The system is continually evolving as enhancements are added, and specific capabilities may vary from site to site. The general description provided below characterizes SIMNET as available at Fort Knox in late 1989.

SIMNET uses computer-generated imagery to create a large simulated battleground over which combined arms units move, shoot, and communicate. This battleground includes many natural and man-made terrain features, although the terrain is smooth relative to the real world. Various weapons systems appear on and move over this terrain, much as they would in a field setting. These systems interact with each other; e.g., they can "kill" each other with realistic probabilities.

A primary component of SIMNET is manned combat vehicle simulators (CVSs) representing the M1 Abrams tank and the M2 Bradley Fighting Vehicle (BFV). These simulator modules include space for all crew positions. Each crew member station includes vision blocks or sights providing views of the computer-generated terrain. Realistic battlefield sounds, such as weapons firing and track movement, are also provided. Selected weapons systems are available, along with required controls and handles. For example, M1 simulators include the main gun, but not machine guns.

CVSs also incorporate simulated armor protection, communications systems, movement characteristics, and logistic support requirements. Their movement is influenced by terrain factors, and they are subject to maintenance failures. They consume fuel and ammunition and must be resupplied periodically.

A CVS provides its crew members with the illusion of operating a real vehicle over real terrain. The crew operates with many of the capabilities and constraints experienced in the real world. Their vehicle appears on the battleground and can be disabled or killed. They can use the main gun to kill other

vehicles. The result is an intensive simulation experience that gives CVS crews much of the "feel" of the modern battlefield.

All but the smallest SIMNET facilities include a simulated tactical operations center (TOC) and a simulated combat trains command post (CP). These elements appear on the computer-generated battleground but do not have a view of it. TOC and CP personnel control combat operations using radios and map boards, much as they do in real-world exercises.

The combat support available in SIMNET is provided through a fire support workstation located in or near the TOC. The operator of this workstation processes requests for artillery, mortars, and close air support (CAS). Indirect fires have realistic effects on vehicles on the SIMNET battleground but not on the terrain (i.e., craters do not appear). Fire support systems appear on the battleground and are subject to combat damage, but they are computer-controlled rather than manned. They do not move over the terrain; rather, they disappear from one location and reappear at another after an appropriate time.

Combat service support operations in SIMNET are handled through a workstation located in the combat trains CP. The operator of this workstation can dispatch computer-controlled resupply and maintenance vehicles on the SIMNET battleground, much as fire support systems are moved. Maintenance and resupply operations are handled artificially in SIMNET, but realistic times for them are included. For example, refueling is done simply by pushing buttons, but CVSS must move near a fuel supply vehicle and wait an appropriate period of time for refueling. Combat service support is realistic in SIMNET in terms of its effect on maneuver operations.

Other important components of SIMNET include manned aircraft simulators and semiautomated forces (SAFOR). Simulators representing fixed- and rotary-wing aircraft are available at selected sites. The SAFOR workstation allows one operator to control a large number of unmanned simulators appearing on the SIMNET battleground. This facility can be used to portray both friendly and Threat forces.

A plan view display (PVD) and stealth vehicle are available to support observation of SIMNET exercises. The PVD provides a graphic overhead view of portions of the battleground, with icons representing vehicles. The stealth capability provides a view of the battleground from an invisible vehicle moving on or above it. Standard procedure calls for these tools to be used by the echelon above the training unit. A data logger records SIMNET exercises for replay through the PVD or stealth vehicle, to support after action reviews (AARs).

The linking of SIMNET's components through local area and long-haul networks results in a reasonable approximation of combined arms battles without expenditure of field training resources. Depending on the components available, maneuver units can conduct exercises at platoon, company team, battalion task force, and perhaps higher echelons. The capabilities of SIMNET provide for the repeated practice of many collective tasks, primarily in the areas of command, control, and maneuver.

Before moving on to more detailed assessment of SIMNET's capabilities, the system's general limitations must be noted. SIMNET does not fully replicate the field training environment. CVSSs differ from actual combat vehicles in several ways. For example, they do not include machine guns and they operate only with hatches closed on a daylight battlefield. The computer-generated terrain is fairly smooth and open and it cannot be modified by exercise participants (e.g., fighting positions cannot be prepared). The complete combined arms team is not incorporated in SIMNET at this time. Dismounted infantry, air defense artillery (ADA), and nuclear, biological, and chemical (NBC) assets are not generally available in the simulation. These limitations constrain the collective tasks that can be performed in SIMNET.

Training Assessment Needs. SIMNET provides a prime example of the situation described earlier in this paper. That is, the simulation has been developed without complete determination of the tasks that units can train with it. One reason for this is that it was developed by DARPA rather than through normal Army procedures for acquisition of devices and simulations. DARPA developed SIMNET to meet general training requirements using available (and affordable) technology. It was not developed to train precisely determined tasks and skills.

Resources to support SIMNET training effectiveness and transfer studies have been and continue to be scarce. Such studies (including the completed concept evaluation program described below and the ongoing FDT&E) have been limited to selected platoon-level tasks. Resources are simply not available to provide appropriate experimental and control groups at higher echelons. Complete determination of SIMNET's training capabilities through controlled studies or tests thus does not seem to be a realistic possibility.

SIMNET represents an appropriate context for the development and application of an efficient method for the assessment of training capabilities. Training managers must have such an assessment to integrate SIMNET with other training resources. The next section summarizes previous attempts to provide this.

## Previous SIMNET Assessments

Concept Evaluation Program (CEP). An initial attempt to assess ARTEP MTP tasks that can be trained with SIMNET was accomplished in conjunction with a SIMNET CEP in 1987. Gound and Schwab (1988) reported the results of the CEP, and Brown, Pishel, and Southard (1988) reported these same results plus those for a follow-on field evaluation. These efforts provided some indications of positive transfer of SIMNET training to field performance, but the overall results were inconclusive. This was due to the limited sample size (8 platoons), pretest differences between experimental and control groups, and incomplete control over tasks performed in field evaluations.

In an early phase of the CEP, military personnel who had experience with SIMNET assessed the degree to which selected ARTEP MTP tasks and drills could be trained in the simulation. They rated armor platoon tasks and drills making up three situational training exercises (STXs) performed in the CEP. Gound and Schwab (1988) presented the results of this effort, but they did not provide details on how it was accomplished. They reported that 66 tasks and drills were judged as fully trainable on SIMNET, 21 were partially trainable, and 54 were not trainable. A task was counted more than once in these totals if it appeared in more than one STX.

Brown, Pishel, and Southard (1988) presented additional ratings of the degree to which tasks could be trained with SIMNET. Following training and testing, CEP participants rated 83 tasks in terms of the extent to which SIMNET was helpful in training. A total of 34 tasks were rated as not trainable with SIMNET, while SIMNET training was rated as extremely helpful for 11 tasks, primarily involving movement activities.

The authors of both CEP reports emphasized that SIMNET cannot be used to train all tasks. They identified command, control, and maneuver as promising areas for SIMNET training. The information presented on the degree to which specific tasks could be trained with the simulation was limited. Only platoon-level tasks involved in three STXs were rated. The two sets of ratings obtained were not directly compared with field performance or with each other. This was probably due to the fact that the CEP emphasized overall platoon performance and only a few tasks were common between the pretest and posttest.

Informal Assessments. Following the CEP, several agencies completed assessments of the collective tasks that could be trained with SIMNET. These assessments were informal in that they were not done in conjunction with a formal test and they were not published in an official Army document. The primary ones dealing with armor tasks are briefly described below.

Instructors in the Armor School's Command and Staff Department have assessed SIMNET's capabilities to support institutional training (G. Whitehead, personal communication, December 1988). Small groups of instructors familiar with SIMNET reviewed the tasks taught in various courses and rated the degree to which they could be trained with the simulation, usually in fully, partially, and not supported categories. These efforts satisfied near-term instructional design needs, but they did not provide an adequate overall assessment of SIMNET's capabilities. They addressed tasks taught in selected courses (such as Armor Officer Basic (AOB)) and did not provide a comprehensive or rigorous assessment of all armor tasks described in ARTEP MTPs.

Personnel in operational units training with SIMNET have also assessed the system's training capabilities. For example, the commander of an armor battalion located at Fort Knox provided such an assessment following extensive use of SIMNET in preparation for National Training Center (NTC) exercises (J. Walters, personal communication, January 1989). This effort furnished many useful lessons learned about SIMNET's capabilities and limitations. But it did not, nor was it intended to, provide a detailed analysis of the ARTEP MTP tasks which could be trained in the simulation.

Under contract to the Army Research Institute (ARI), Human Resources Research Organization (HumRRO) personnel completed an analysis of the simulation of tank platoon operations on SIMNET (Drucker and Campshure, in preparation). They analyzed armor operations to identify activities performed by tank platoons during combat. They then attempted to perform a representative sample of these activities on SIMNET. Well-defined criteria and check lists were used to record observations of the degree to which activities could be performed. The result was a very detailed analysis of the performance of platoon activities on SIMNET. Limitations of this effort for present purposes are that it addressed only platoon-level operations and it was accomplished within a contractor-developed framework of activities, rather than within the ARTEP MTP task framework.

SIMNET Users' Guide. A comprehensive analysis of armor and mechanized infantry tasks that could be performed in SIMNET was completed during development of the SIMNET Users' Guide (USAARMS, 1989). The results were presented in appendixes of that document addressing ARTEP MTP tasks for platoon, company team, and battalion task force echelons. The degree to which tasks could be performed in SIMNET was described in terms of high, partial, and minimal ratings. Listings were also provided for tasks that could not be performed in the SIMNET environment, as well as tasks that could be performed in a SIMNET facility but were not directly supported by the simulation.



The ratings in the SIMNET Users' Guide described the degree to which tasks could be performed with SIMNET, rather than the degree to which they could be trained. In developing the ratings, the analysts felt that they could address performance capabilities more accurately than training capabilities. A task must be performable before it is trainable in the simulation. Determination of whether a performable task is trainable should be based upon attempts to train it (e.g., training effectiveness and transfer studies). The ratings identified tasks which units should attempt to train in the simulation; i.e., tasks with high or partial performance ratings. Madden (in preparation) has argued that ratings of this nature should address the degree to which tasks can be evaluated. Since performance is prerequisite to evaluation as well as training, the approach taken in the SIMNET Users' Guide seems to be appropriate. This same general approach of rating performability was used in the method described in the next section of the present report.

Two civilian analysts managed development of the assessments presented in the SIMNET Users' Guide. They reviewed SIMNET's capabilities and limitations, the results of previous relevant assessments, and task documentation in collective front end analyses and ARTEP MTPs. They then completed an initial grouping of the tasks into the rating categories. This was based largely upon the number of subtasks under each task which could be performed.

The analysts conducted working sessions to coordinate the initial ratings with various groups of personnel. These included Armor School instructors and representatives of a local unit, all of whom had extensive experience with SIMNET. Initial ratings were modified to reflect the consensus of these groups. The ratings were then reviewed by senior Armor School personnel before they were finalized. The final ratings thus represented the consensus of opinion among all available experienced SIMNET users, rather than the results of a rigorously structured process.

Summary. Several attempts have been made to identify the collective armor tasks that can be trained with SIMNET. These have all provided useful information, but they have not fully met the need described at the beginning of this report. Most of the efforts have addressed only selected tasks, usually at platoon level. None of them have analyzed specific ARTEP MTP standards that can be met, nor have they documented efficient generalizable procedures for assessing the capabilities of training devices and simulations within the ARTEP MTP framework. The next section provides such procedures, integrated with a comprehensive example of their application.

## Approach and Application

### Purpose

Requirement. As was summarized in the introduction, the near-term requirement for this effort was to satisfy a request from TEXCOM through the USAARMS DOTD. TEXCOM personnel expressed a need for a more detailed analysis of SIMNET's performance capabilities than that provided in the SIMNET Users' Guide. They indicated that the analysis should assess the degree to which armor ARTEP MTP standards could be met in SIMNET, for platoon, company team, and battalion task force echelons. They also requested that the assessments for standards be consolidated into subtask and task assessments, using simple well-defined decision rules.

TEXCOM requested this analysis to support FDT&E, using SIMNET as a surrogate for the Close Combat Tactical Trainer (CCTT). The Army is currently initiating development of the CCTT as an enhanced combined arms simulation. SIMNET represents a prototype of this system. TEXCOM is currently conducting a training transfer study for selected tasks in SIMNET. One of the uses of the results will be to estimate the accuracy of the assessments provided in the present report. This will determine if the approach described herein can be used to predict training capabilities of the CCTT.

The near-term requirement described above has been met. The SIMNET assessments described in this report were provided to TEXCOM through the USAARMS DOTD in January 1990. One purpose of this report is to document these assessments and make them available to other potential military users. Another purpose is to address the Army's long-term requirements for assessing the capabilities of training devices and simulations. The assessment method developed to meet TEXCOM's need is documented here so that it can be used or modified as necessary to predict the capabilities of the CCTT and other future devices/simulations. Possible extensions and modifications of the method are discussed in a later section of this report.

Objectives. The effort described in this report addresses both the near-term and long-term requirements summarized above. The near-term objective is to assess the degree to which armor ARTEP MTP standards can be met and subtasks and tasks can be performed in SIMNET, and to document the results relating to platoon, company team, and battalion task force echelons.

Long-term requirements are addressed through two related objectives. The first is to document the assessment method used and lessons learned during its application. This provides an approach which can be used in conjunction with training effectiveness and transfer studies to assess the performance

capabilities of devices and simulations other than SIMNET. The second long-term objective is to examine extensions of the approach beyond assessment of performance capabilities. These extensions include identification of enhancements needed in devices and simulations and development of performance measures.

### Assessment Method

**Task Framework.** An initial step in assessing the tasks that can be performed or trained in a simulation is determination of the tasks to be considered. As described earlier, previous SIMNET assessments used task lists derived from a number of sources, including ARTEP MTPs, institutional programs of instruction, and contractor-developed task analyses. In accordance with TEXCOM's request, the present effort was based upon task documentation in current ARTEP MTPs.

ARTEP MTPs were used not only to comply with TEXCOM's request, but also to generate a product having maximum utility for Army trainers. These documents provide the collective tasks, conditions, and standards to support unit training programs. Unit leaders develop training events to provide performance-oriented training on ARTEP MTP tasks, under the general conditions and to the standards prescribed. These leaders use ARTEP MTPs to develop SIMNET training exercises much as they do field exercises (USAARMS, 1989). Basing the assessment of SIMNET's capabilities on the ARTEP MTP task framework should thus result in a product that is directly useable by the primary audience, unit trainers.

The specific ARTEP MTPs used in this effort were ARTEP 17-237-10-MTP for the tank platoon (Department of the Army (DA), 1988a), ARTEP 71-1-MTP for the tank and mechanized infantry company team (DA, 1988b), and ARTEP 71-2-MTP for the tank and mechanized infantry battalion task force (DA, 1988c). These documents use a standardized format for providing task documentation. Each task description includes the general conditions under which the task is to be performed and the overall task standard specified as criteria for successful performance. The subtasks, steps, or actions involved in task performance are listed sequentially. Detailed standards are listed under each subtask. These standards should specify how well each subtask must be performed or the desired outcome of performance. In most cases the standards list the steps or elements involved in subtask performance and do not provide clear evaluation criteria. These listings might more accurately be described as subtask elements rather than standards, at least for the three ARTEP MTPs used in this effort. But they will be described as standards here, in keeping with ARTEP MTP policy.

Armor ARTEP MTPs represent widely available standardized sources of detailed task documentation. They thus provide an

appropriate framework for assessment of the collective armor tasks that can be performed in SIMNET. However, use of these documents does have certain drawbacks. Assessment of the tasks that can be performed in SIMNET should be based upon detailed analysis of the behaviors involved in each task. ARTEP MTPs are designed to support training evaluation, and they do not provide a consistently detailed behavioral analysis. Subject matter experts (SMEs) develop the task descriptions, and they may not list all the behaviors involved in performing a task. The task descriptions within an ARTEP MTP are developed by different SMEs, so the details provided are not always consistent.

The present author occasionally encountered inconsistent or unclear task descriptions while using the armor ARTEP MTPs. However, these documents represent the best generally available source of collective task documentation. ARTEP MTP task descriptions were thus used in the present effort without any attempt to modify or "read into" them. The purpose here was to provide an example of the application of an assessment method, rather than to conduct a behavioral analysis as a basis for revising ARTEP MTPs. Unless a detailed comprehensive behavioral analysis is available, any similar assessments in the future should be based upon ARTEP MTPs. Problems noted and lessons learned in using these documents are discussed in more detail later in this report.

Standard Criteria. Once the universe of tasks to be considered is identified and appropriate task documentation is obtained, the next step in the assessment method is to rate the degree to which each task element or standard can be performed or met in the simulation. In the application described here, the degree to which each ARTEP MTP standard could be met in SIMNET was rated.

The advantage to assessing standards rather than subtasks or tasks is that the ratings relate to more precisely defined actions. This should result in more accurate and reliable judgments. Task titles and subtask descriptions are general and open to interpretation. Different raters may have different understandings of the actions implied by a task title. Standards in general provide a relatively small and precise description of behavior.

The disadvantage in assessing standards is that many more ratings must be accomplished. An ARTEP MTP task description may include 30 or more standards listed under subtasks. Also, ARTEP MTP standards do not always describe the required actions as precisely as one would like.

To assess the degree to which standards can be met in a simulation, clear criteria must be established. The criteria used in the SIMNET application are shown in Table 1. Five rating

categories were defined, similar to those used in the SIMNET Users' Guide. Examples of ratings falling within each category were also identified.

Table 1

Criteria for rating ARTEP MTP standards

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Highly supported (H) - The standard can be met entirely. All required actions can be performed realistically (i.e., much like they are performed in field training or combat).

Examples: Issue a warning order.  
Maintain interval and speed in accordance with METT-T.

Partially supported (P) - The standard can be met to a large extent. The majority of required actions can be performed realistically. The remainder must be performed under artificial conditions (i.e., not like they are performed in the field), due to limitations of the simulation.

Examples: Analyze the five military aspects of terrain.  
Use authorized frequencies and call signs from the unit SOI.

Minimally supported (M) - The standard can be met to a limited extent. The majority of required actions must be performed under artificial conditions. The remainder can be performed realistically.

Examples: Resupply vehicle.  
Reload main gun.

Outside support required (O) - The standard can be met in the SIMNET facility, but at least half of required actions must be performed outside the simulation. Users must provide support for actions that are not directly supported by the simulation.

Examples: Redistribute personnel.  
Prepare casualties for evacuation.

Not supported (N) - The standard cannot be met in the SIMNET system or facility. A significant portion (more than 25%) of the required actions cannot be performed in the simulation and is not appropriate to perform in the facility.

Examples: Camouflage vehicles and equipment.  
Employ chemical agent alarms.

---

The present author used the standard criteria to rate the degree to which each standard from the three armor ARTEP MTPs could be met in SIMNET. This required a total of 4381 ratings. The rater read each standard and assigned one of the ratings to it, based on the proportion of required actions that could be performed in SIMNET. He had previously acquired knowledge of SIMNET's capabilities and limitations during development of the SIMNET Users' Guide.

Ideally, the ratings should have been accomplished by a group of SMEs highly experienced with SIMNET. However, discussions with a USAARMS DOTD representative indicated that sufficient SME support would not be available to accomplish the number of ratings required. The agreement reached was that the present author would accomplish the initial ratings, and these would then be reviewed and modified by SMEs. The coordination process is described later in this report.

Using SMEs to accomplish the ratings would have resulted in assessments based upon extensive experience with the actions involved in each standard. The present author is generally familiar with armor ARTEP MTP tasks, subtasks, and standards, but he has not had experience in performing them. Having all the ratings accomplished by one individual did offer some advantages. One of these was the efficiency with which the ratings were completed. Another was internal consistency. In many cases the same or a very similar standard appeared under more than one subtask. The rater attempted to ensure that the same rating was given to a standard wherever it appeared. A team of raters would probably not have been as consistent. Also, the rater attempted to interpret each standard literally and not "read into" it. A team of raters with varying experience levels might have interpreted the standard descriptions in different ways. To integrate the advantages of individual and team approaches, future assessments of this nature should probably be accomplished by a small group of SMEs, with the ratings carefully coordinated and reviewed by one individual.

Decision Rules. After all standards have been rated, the next methodological step is to consolidate these ratings into subtask and task assessments. This is accomplished through application of decision rules rather than additional ratings.

For the SIMNET application, the present author developed rules for combining the standard ratings into subtask assessments. These are shown in Table 2. The codes are explained in Table 1. For all possible combinations of standard ratings, these rules determine the subtask assessments.

Rules were also developed for combining subtask assessments into task assessments. These are shown in Table 3. These rules are similar to those shown in Table 2, except the criticality of

Table 2

Decision rules for combining standard ratings into subtask assessments

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Subtask

- H - Majority of standards H, and no standards N or O.
  - P - If 3 or more standards, majority H or P and no more than 1 N or O.  
If 2 standards, ratings of PP, HP, or HM.  
If 1 standard, rating of P.
  - M - If 3 or more standards:  
majority not H or P and no more than 1 N or O, or  
more than 1 N or O, with at least 1 N, but no more than 25% of standards N or O, or  
more than 1 O and no N, but less than 50% of standards O.  
If 2 standards, ratings of MM, MP, PN, HN, PO, or HO.  
If 1 standard, rating of M.
  - O - If more than 3 standards, at least 50% of standards O, and no more than 25% N.  
If 3 standards, at least 2 standards O.  
If 2 standards, ratings of MO or OO.  
If 1 standard, rating of O.
  - N - If more than 3 standards, more than 25% of standards N or O and at least 1 N; if 50% or more of standards O, then more than 25% N.  
If 3 standards, at least 2 standards N or 1 N and 1 O.  
If 2 standards, ratings of NN, NM, or NO.  
If 1 standard, rating of N.
- 

subtasks is an additional consideration. This is due to the fact that ARTEP MTPs indicate which subtasks are critical, but do not provide such an indication for standards. The assumption is that all standards are critical to subtask performance.

The present author applied the decision rules to the standard ratings to develop 1025 subtask assessments and 167 task assessments for the SIMNET application. Similar rules should be usable for other applications. The advantage of this approach is that, once standard ratings are completed, subtask and task assessments can be obtained easily. These assessments are based upon consideration of all involved standards in a consistent manner. The decision rules are algorithmic, so the consolidation of standard ratings could be automated.

Table 3

Decision rules for combining subtask assessments into task assessments

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Task

- H - Majority of subtasks H, and no subtasks N or O, and all critical subtasks H or P.
  - P - If 3 or more subtasks:  
majority H and no subtasks N or O, with at least 1 critical subtask M, or  
majority H or P and no more than 1 N or O and no critical subtasks N or O.  
If 2 subtasks, ratings of PP, HP, or HM.
  - M - If 3 or more subtasks:  
majority H or P and 1 critical subtask N or O, or  
majority not H or P and no more than 1 N or O, or  
more than 1 N or O, with at least 1 N, but no more than 25% of subtasks N or O and no more than 1 critical subtask N, or  
more than 1 O and no N, but less than 50% of subtasks O.  
If 2 subtasks, ratings of MM, MP, PO, HO, PN, or HN, with no critical subtasks N.
  - O - If more than 3 subtasks, at least 50% of subtasks O, and no more than 25% N.  
If 3 subtasks, at least 2 subtasks O.  
If 2 subtasks, ratings of MO or OO.
  - N - If more than 3 subtasks, more than 25% of subtasks N or O and at least 1 N, or more than 1 critical subtask N; if 50% or more of subtasks O, then more than 25% N.  
If 3 subtasks, at least 2 subtasks N or 1 N and 1 O.  
If 2 subtasks, ratings of NN, NM, or NO; or ratings of PN or HN with critical subtask N.
- 

Review and Coordination of Ratings. As discussed earlier, the ratings of the degree to which standards could be met in SIMNET were accomplished by a civilian analyst rather than military SMEs. After the initial ratings were completed, they were submitted for SME review. USAARMS DOTD representatives provided the standard criteria, decision rules, and ratings to the USAARMS Command and Staff (C&S) Department and requested a thorough review. C&S Department instructors who had experience with SIMNET performed the review and provided suggestions for



changes. These suggestions and the actions taken in response to them are described below in the discussion of results.

This approach to staffing the ratings worked well in this case but it was not ideal, in that the initial rater did not interact directly with the reviewers. Due to the large number of ratings, various instructors performed the review as they had time available. If possible, future applications of the method presented here should include a more controlled review process. Or, as suggested earlier, the process should be reversed so that SMEs accomplish the initial ratings and an analyst reviews them for consistency.

### SIMNET Results

Ratings and Assessments. The standard ratings and subtask and task assessments for SIMNET are provided as appendixes to this report. Appendix A contains the platoon results for all 59 tasks in ARTEP 17-237-10-MTP (DA, 1988a), Appendix B contains the company team results for all 55 tasks in ARTEP 71-1-MTP (DA, 1988b), and Appendix C contains the battalion task force results for all 53 tasks in ARTEP 71-2-MTP (DA, 1988c).

The codes used in the appendixes are those explained in Table 1. Each entry in the appendixes includes the ARTEP MTP designation, the task title and number, the overall task rating or assessment, the subtask and standard ratings organized by ARTEP MTP paragraph designations, and comments on the ratings. A "+" by a subtask number indicates that the subtask is a critical one. To identify the standards and subtasks under a given task, the reader will need to refer to the task description in Chapter 5 of the appropriate ARTEP MTP. An abbreviated format was used here to avoid duplicating ARTEP MTPs as appendixes to this report.

Table 4 provides a summary of the SIMNET assessments at the task level. The numbers and percentages of tasks falling in each assessment category are shown by echelon and for the three echelons combined. Using the criterion that tasks must be at least partially performable in order to be trainable in SIMNET, the results indicate that 35% of the ARTEP MTP tasks assessed can be trained in SIMNET (i.e., have an H or P rating). The platoon echelon has the highest percentage of trainable tasks (41%), but it also has the highest percentage of tasks that are not supported by the simulation (46%).

The overall result of this effort (35% of tasks trainable) should not be taken as an indictment of SIMNET. The simulation was not designed to support training on all collective tasks. An examination of the task assessments by functional area indicated that SIMNET can support training of about half of maneuver and command, control, and communications tasks and all fire support

**Table 4**

**Number and percentage of tasks in each SIMNET assessment category**

Assessment	Echelon			
	Plt	Co Tm	Bn TF	Overall
H	14 (24%)	5 (9%)	9 (17%)	28 (17%)
P	10 (17%)	11 (20%)	9 (17%)	30 (18%)
M	7 (12%)	14 (25%)	16 (30%)	37 (22%)
O	1 (2%)	2 (4%)	0 (0%)	3 (2%)
N	27 (46%)	23 (42%)	19 (36%)	69 (41%)

tasks. The simulation provides little support in other areas, such as intelligence and mobility, countermobility, and survivability. This is in line with the view that SIMNET is primarily a command, control, and maneuver trainer.

At this point it should be noted that the assessment reported here was based on SIMNET's capabilities as of late 1989. Some system upgrades have been introduced since that time. The standard ratings may thus need to be updated, although this should have little impact on the task assessments. Potential users of the detailed assessments provided in appendixes to this report should check the status of SIMNET to determine whether updating is required.

The standard ratings presented in the appendixes incorporate most of the changes suggested by C&S Department reviewers. These reviewers suggested changes in only 2% of the initial standard ratings, and 83% of these changes were made. Most of the changes not made related to differing interpretations of ARTEP MTP standard descriptions. For example, the present author considered two standards joined by an "and" as one standard, whereas C&S Department reviewers did not. The present author did not observe the review process, but suggested changes were widely distributed and consistent throughout the ratings. This indicates that the reviewers were thorough. However, as noted earlier, a more structured review process would be advisable for future assessments of this nature.

The results of this effort should be used not to argue for or against the utility of SIMNET, but rather as a basis for

development of training or testing strategies. Keeping in mind the cautions noted above, unit leaders can use the assessments to determine the tasks to train in SIMNET versus field exercises. Members of the operational testing community can also use them to determine tasks to include in training effectiveness and transfer studies. The detailed assessments provided here should support detailed strategy development. For example, a unit leader may elect to train a task with SIMNET that is partially supported by the simulation. He can use the results of the present effort to determine subtasks that cannot be performed in SIMNET and thus require emphasis during field training.

Comparison to Previous Assessments. The only previous assessment addressing the same armor ARTEP MTP tasks as the present effort is the SIMNET Users' Guide. Results provided in that document and the present report thus represent the only SIMNET performance assessments that can be compared directly. This comparison is restricted to the task level, since the SIMNET Users' Guide did not provide standard or subtask ratings.

The assessments in the present report and the SIMNET Users' Guide were the same for 72% of the 167 tasks addressed. Most of the differences represented a shift to the adjacent value on the rating scale. For example, a task rated H in one assessment was rated P in the other, or vice versa. Only 7 task ratings (4% of the total) differed by more than this amount. Applying the trainability criterion suggested earlier (tasks must be at least partially performable to be trainable in SIMNET), 20 of the tasks (12% of the total) were rated as trainable in one assessment and not trainable in the other. That is, these tasks were rated H or P in one assessment and M, O, or N in the other. The results of the two efforts were thus in close but not complete agreement.

The present results were obtained through a more systematic and detailed approach than that used in development of the SIMNET Users' Guide. They should thus be considered in future revisions to that document. USAARMS DOTD representatives are currently using them for such a revision.

In general, the present results offer two improvements over previous assessments. One of these is the level of detail provided. No previous assessments have produced ratings for ARTEP MTP subtasks and standards. The second is the amount of structure provided. Well-defined decision rules were used here to form composite (i.e., subtask and task) ratings. Subjective judgment was applied to assessing relatively small and precise descriptions of actions (i.e., standards). The approach developed here provides a method for structuring the subjective judgment process in assessing the capabilities of devices and simulations.

Lessons Learned. A primary lesson learned in this effort relates to the use of ARTEP MTPs. As noted earlier, ARTEP MTP task descriptions were not developed to support an analysis of the nature reported here. The standards do not always describe required actions in complete detail, and subtask and standard descriptions written by different authors are not always consistent. For example, tasks which include a subtask involving the gathering of information from an observation post (OP) do not consistently include a subtask or standard relating to occupation of the OP. ARTEP MTPs were used as a basis for the SIMNET assessment since the advantages (i.e., wide availability and standardized format) outweighed the disadvantages. Future assessments of this nature should be based on detailed behavioral analyses of the actions required in performing each task, if such analyses are available. If not, then perhaps SMEs should accomplish the initial standard ratings while adjusting ARTEP MTP statements as necessary.

As suggested above and earlier in this report, increased SME involvement would be advisable in future applications of the assessment method. SMEs should either accomplish the initial standard ratings or review them through a highly structured process. In this way, ratings would be based on real-world experience rather than literal readings of ARTEP MTP statements. However, tight control would need to be exercised to ensure consistency in SMEs' ratings.

One of the reasons for limited SME involvement in the SIMNET assessment was the large number of ratings required. A stabilized team of SMEs generally will not be available to accomplish thousands of ratings. Future assessments should address smaller numbers of tasks. This could be accomplished by addressing only one echelon, or by eliminating from consideration those tasks which a device or simulation was obviously not designed to train.

The final lesson learned relates to the decision rules used here (see Tables 2 and 3). These rules were not strictly based on any existing guidance for the consolidation of performance ratings. Rather, they evolved as rules which seemed to lead to the most reasonable overall results for the SIMNET application. Future assessments of the capabilities of devices and simulations should use well-defined decision rules to standardize the formation of rating composites. But the specific rules developed here represent a suggested starting point and are not meant to be immutable. Users of the assessment method should consider whether any changes to specific aspects of these rules are appropriate. An example of a possible change is one suggested by reviewers of the SIMNET ratings. The rules presented in Table 3 dictate that a task be rated M if one and only one critical subtask is rated N. C&S Department reviewers recommended that such a task be rated N. If this change had been made, 19 of the

task ratings would have changed from M to N. The change was not made in order to avoid seemingly untenable results, such as concluding that a battalion task force could not move tactically in SIMNET because one critical asset (air defense artillery) was not available.

## Extensions of the Approach

### SIMNET Enhancements

Requirement. TEXCOM representatives asked that the assessment approach be extended to identify enhancements needed in SIMNET. That is, for each ARTEP MTP standard that was not rated as capable of being met to a high degree in SIMNET, what enhancement(s) would be needed to raise the rating to this level?

The apparent purpose of TEXCOM's request was to support extension of the SIMNET assessment to the CCTT. By comparing the SIMNET enhancements needed to the capabilities designed for the CCTT, TEXCOM representatives could extrapolate the standards which in the future can be met in the CCTT. This would result in an assessment of the CCTT's capabilities prior to fielding.

Extension of the assessment method to identify enhancements needed should address general requirements in the design of devices and simulations, as well as addressing TEXCOM's specific requirements. The design of new devices and simulations should, in many cases, be based upon assessment of enhancements needed in existing ones. The USAARMS DOTD has used this strategy, at a general level, in basing the design of the CCTT on capabilities and limitations of SIMNET. The assessment method described in this report can be extended to support application of this strategy at a more detailed level. That is, the enhancements needed to support training of each ARTEP MTP standard, subtask, and task can be identified.

Example Application. To satisfy TEXCOM's request, the present author and USAARMS DOTD personnel undertook a joint effort. The present author developed the extension method and applied it to a sample of tasks. DOTD personnel then applied the method to remaining ARTEP MTP tasks. The method and results of the sample application are described below.

First, a sample of five tasks was selected from each of the three echelons (platoon, company team, and battalion task force). The tasks were selected to represent a variety of ARTEP MTP functional areas. The present author then reviewed the standard ratings for these tasks. For each standard that was not rated H, he listed the SIMNET enhancement(s) that would be required to raise the rating to that level. In other words, he identified the modification(s) that would be needed in SIMNET to remove any limitation(s) on meeting each standard. For example, if a

standard could not be met because it required dismounted personnel, then dismount capability was listed as the enhancement required.

It soon became apparent that a straight listing of the enhancements needed under each task would not be very useful. The present author then developed three categories for organizing the enhancements. These categories were based on two factors, the feasibility of the enhancements and the effect on the overall task rating. Enhancements which did not appear feasible or worth the cost of adding were grouped in one category, based on the present author's understanding of simulation technology. Feasible enhancements were then grouped into two categories, depending on whether the addition of each enhancement would raise the overall task rating. In some cases the addition of one or two enhancements would remove key limitations and raise the task rating, using the decision rules described earlier in this paper. These enhancements affecting task performance were identified as the most important ones. The specific category definitions used in this effort are listed in Table 5.

Table 5

Definitions of enhancements categories

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Category A: Enhancements that are feasible and will result in raising of the task rating. There will usually be no more than two of these listed for a task; for some tasks one or two enhancements will make a difference in the rating. There will be no Category A enhancements listed for tasks rated H, since this rating cannot be raised.

Category B: Enhancements that appear to be feasible but will not in and of themselves raise the task rating. These would be "nice to have" to increase training realism, but they will not have an impact on the task rating.

Category C: Enhancements that do not appear to be feasible or worth adding. They do not affect the task rating and are probably not appropriate for SIMNET/CCTT.

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The results of the enhancements assessments for the 15 sample tasks are provided in Appendix D. Each task assessment is repeated from an earlier appendix, followed by the list of enhancements needed, organized by categories and referenced to each applicable standard. Comments on the effects of adding the enhancements are also provided.

This approach to enhancements identification should be useful in designing or assessing the capabilities of new devices and simulations. It can be used to identify key enhancements, in terms of their effects on task performance. By examining the enhancements needed across all relevant tasks, analysts can determine the enhancements that should have the biggest payoffs in tasks that can be performed using a device or simulation. For example, the sample analysis in Appendix D indicates that dismount capability is an important enhancement needed in SIMNET (i.e., it appears in Category A several times). This approach provides a means to prioritize enhancements, and this is an important capability in times of tightening budgets.

### SIMNET Performance Measures

Requirement. Collective performance measurement is prerequisite to effective SIMNET training, for a number of reasons. When using SIMNET, unit and institutional trainers need performance measures to support internal evaluation through development and conduct of after action reviews (AARs). SIMNET training managers need similar measures to support provision of take-home packages (THPs) to training units. Operational test agencies need performance measures to support training effectiveness and transfer studies, and research and development agencies need them to support experimentation with SIMNET training methods.

The Army Research Institute (ARI) has initiated a research program to address the SIMNET performance measurement needs described above. A performance measurement system is being developed to integrate automated measures collected from the SIMNET computer network via a personal computer and observational measures collected by watching unit activities or listening to communications nets. To support transfer studies, this system will emphasize measures that are highly compatible with ones gathered at combat training centers (CTCs). Composites or summaries of the measures will be formed to support both user feedback and research requirements.

The key component of ARI's program is development of valid SIMNET performance measures and reliable means for collecting them. The detailed performance assessment documented in the present report provides a framework for this effort. This assessment identifies actions that can be performed in SIMNET. The next step is to develop measures of these performances.

Example Application. Comprehensive measurement of the performance of a collective task in SIMNET requires measures of the subsidiary actions (subtasks and standards) that can be performed at least partially in the simulation. For platoon tasks, ARI personnel are currently developing measures for subtasks and standards that received H or P ratings in the

performance assessment. Means of collecting these measures are also being identified.

Table 6 shows a simple example of use of the performance assessment results as a framework for development of measures. Brief descriptions of the subtasks and standards for a selected platoon task are provided, along with the performance ratings. In this case all the ratings are H or P, so suggested measures are listed for all the subtasks and standards. Indications are also provided as to whether the measures can be collected by automated (extraction of data from computer network) or observational (watching or listening to activities) means.

Application of this "bottom-up" approach will result in a comprehensive set of performance measures. Composites of these measures must be formed to support assessments of task performance. Research is needed to determine whether such composites adequately address overall performance. It may be that "the whole is greater than the sum of the parts". That is, some aspects of task performance may not be captured by measuring performance of subtasks and standards as described in ARTEP MTPs. "Top-down" and "bottom-up" approaches may need to be integrated.

It is important to note that measures such as those listed in Table 6 represent measures of performance (MOP), not measures of effectiveness (MOE). MOP describe the performance of a unit in a particular situation. Military experts should examine relevant MOP to determine if the performance exhibited was acceptable, given the conditions under which it occurred. This application of expert judgment will result in MOE. The purpose of the MOP development effort described here is to support informed expert judgment.

The approach described above should facilitate collective performance measurement in general, not just in the SIMNET context. It may help resolve some of the problems in ARTEP MTPs noted earlier in this report.

### Conclusions

The method described in this report provides a comprehensive approach to assessing the capabilities of existing training devices and simulations. Application of the method resulted in detailed analysis of ARTEP MTP standards that can be met and subtasks and tasks that can be performed in SIMNET. These results were provided to TEXCOM, to support ongoing FDT&E using SIMNET as a prototype for the CCTT. The utility and accuracy of the SIMNET assessment and the degree to which it can be extended to the CCTT will be addressed further following completion of TEXCOM's effort. This assessment produced results that met TEXCOM's near-term requirements and were in general agreement at the task level with results in the SIMNET Users' Guide.



**Table 6**

**Observational (O) and automated (A) performance measures for platoon task 17-3-0203, execute a column formation**

Subtask/Standard	Rating	Measure(s)
1. Platoon leader orders column formation.	H	Time (end) order issued (O).
a/b. Uses proper hand-and-arm signal or voice command.	H	Proportion of required elements provided in command (O).
c. Tank commanders (TCs) acknowledge order.	H	Number of TCs acknowledging order (O).
+2. Platoon executes column formation without delay.	H	Time platoon completes execution of formation (O).
a. Platoon leader positions self to control element.	H	Position of platoon leader in formation (O).
b. Lead TC is briefed on or familiar with route.	H	Proportion of required information provided to lead TC (O).
c. TCs maintain interval and speed.	H	Distance between adjacent vehicles in formation (A). Speed of vehicles in formation (A).
d. Platoon orients weapons to provide 360 degree security.	P	Orientation of main gun tubes (A).

The assessment method can be used to project the tasks that can be trained in new devices or simulations, prior to fielding. This will help training managers meet long-term requirements in development of strategies for integrating training approaches or media. Primary advantages to the method are that it results in detailed assessments at the standard through task levels and it focuses the subjective judgment process on relatively well-defined behaviors. Primary cautions in applying the method are that the results will only be as good as the task documentation

(e.g., ARTEP MTPs) upon which they are based and the decision rules may need to be modified to meet future requirements.

The assessment method can be extended to support the design of new devices and simulations by projecting the effects of enhancements to current ones. The enhancements methodology may provide input to portions of the concept formulation process for new collective training devices. This input should support the process of trading off costs of enhancements with effectiveness (measured in terms of the number of tasks or critical subtasks which might be trained with the enhancement).

Cue and response fidelity requirements for training tasks are a major source of concern for Project Manager for Training Devices (PM TRADE) engineers (Meliza and Lampton, in preparation). Engineers expend considerable effort in attempting to gain information about these requirements from subject matter experts. Application of the method described in the present report should help to address this concern in terms of many different device requirements for collective training. Collective training objectives, unlike those for individual skills, tend to remain fairly constant as new weapons systems are introduced. Therefore, the cost of applying the method for assessing the extent to which tasks are performable, as well as the cost of identifying enhancements and their benefits, might be shared by a substantial number of future device design projects.

The assessment method also provides a means to identify key tasks for training effectiveness and transfer of training research, as well as a framework for developing measures of performance for collective training in combined arms simulations. These applications are being examined in an ongoing ARI research program.

## References

- Brown, R. E., Pishel, R. G., & Southard, L. D. (1988). Simulation Networking (SIMNET) preliminary training developments study (TRAC-WSMR-TEA-8-88). White Sands, NM: U.S. Army TRADOC Analysis Command.
- Burnside, B. L. (1982). Subjective appraisal as a feedback tool (ARI Technical Report 604). Alexandria, VA: U.S. Army Research Institute for the Behavioral and Social Sciences. (AD A138 873)
- Department of the Army. (1988a). Mission training plan for the tank platoon (ARTEP 17-237-10-MTP). Washington, DC: Author.
- Department of the Army. (1988b). Mission training plan for the tank and mechanized infantry company and company team (ARTEP 71-1-MTP). Washington, DC: Author.
- Department of the Army. (1988c). Mission training plan for the tank and mechanized infantry battalion task force (ARTEP 71-2-MTP). Washington, DC: Author.
- Drucker, E. H. & Campshure, D.A. (In preparation). An analysis of tank platoon operations and their simulation on SIMNET (ARI Research Report). Alexandria, VA: U.S. Army Research Institute for the Behavioral and Social Sciences.
- Gound, D. & Schwab, J. (1988). Concept evaluation program of Simulation Networking (SIMNET) (TRADOC TRMS No. 86-CEP-0345). Fort Knox, KY: U.S. Army Armor and Engineer Board.
- Madden, J. L. (In preparation). Unit training management system, strategy, and program for SIMNET (ARI Research Report). Alexandria, VA: U.S. Army Research Institute for the Behavioral and Social Sciences.
- Meliza, L. L. & Lampton, D. R. (In preparation). Engineering functions in formulating training device concepts (ARI Research Report). Alexandria, VA: U.S. Army Research Institute for the Behavioral and Social Sciences.
- Perceptronics. (1988) Standing operating procedures for the SIMNET Warfighting Complex, Fort Knox, Kentucky (Technical Document No. 1250-47-1001-88-10). Woodland Hills, CA: Author.
- U.S. Army Armor School. (1987). M1 SIMNET operator's guide. Fort Knox, KY: Author.

U.S. Army Armor School. (1989). SIMNET users' guide. Fort Knox, KY: Author.

U.S. Army Training and Doctrine Command. (1989). Army training 2007 (TRADOC PAM 350-4, Coordinating Draft). Fort Monroe, VA: Author.

**APPENDIX A**  
**Platoon SIMNET Assessment**

PLATOON ARTEP 17-237-10-MTP

PERFORM TACTICAL PLANNING (17-3-0100)

Task Rating: H

Subtask/Standard Ratings:

+1 H aH bH cH dH  
+2 H aH bH cH dH eH fH gH hH iH jH  
+3 H aP bH cH dH  
4 H aH bH  
+5 H aH bP cH dH eH fH gH hH iH jP  
6 H aH bH cH  
+7 H aH bH cH dH eH fH gH  
+8 H aH bH

Comments:

This is a planning task that can be done almost anywhere. Planning should be enhanced by doing it in conjunction with a simulation exercise where plans will be executed.

PLATOON ARTEP 17-237-10-MTP

PREPARE FOR TACTICAL OPERATIONS (17-3-0101)

Task Rating: N

Subtask/Standard Ratings:

1 N aP bM cP dN eO fO  
+2 M aM bM cM dM

Comments:

Units will start out in REDCON 1 in SIMNET. This task needs to be trained in a field setting.

PLATOON ARTEP 17-237-10-MTP

PERFORM PRECOMBAT CHECKS (17-3-0102)

Task Rating: N

Subtask/Standard Ratings:

1 M	aM bM cM dM
2 O	aO bH cO dO
3 M	aH bH cP dO eO
4 O	aM bO cP dO eO fO gO hO iO jO kO lO mM
5 M	aP bN cM
6 M	aM bN cP dN eM fM gP
7 N	aO bN cO dO eN
8 N	aP bN cP dN eN fM gH hO iN jN kN
9 O	aO bO cO dO eO
10 N	aN bN cN dN eN
11 N	aN bN cN dN eN fN
12 N	aM bN cN dN eP

Comments:

Very little of this task can be performed in SIMNET. This task needs to be trained on actual equipment.

PLATOON ARTEP 17-237-10-MTP

PERFORM CONSOLIDATION AND REORGANIZATION ACTIVITIES (12-3-C021)

Task Rating: M

Subtask/Standard Ratings:

+1 P	aN bP cH dH
+2 M	aO bH cM dH eP fM gO hN iM jO kP lM
+3 N	aN bP cH dP eN fN
+4 M	aO bO cO dM eP fM gP hM iH

Comments:

Many of the standards for this task cannot be met in SIMNET. Personnel casualty assessment and evacuation (reason for "O" ratings above) could be performed in the SIMNET facility (using MILES casualty cards), but the standards are not directly supported by the simulation. This task gets a "low minimal" rating.

PLATOON ARTEP 17-237-10-MTP

EMPLOY ELECTRONIC COUNTER-COUNTERMEASURES (17-3-0103)

Task Rating: M

Subtask/Standard Ratings:

+1 M aP bP cM dH eM fN gH hN iP  
2 N  
+3 M aH bN cH dM  
4 P  
5 H aH bH cP dH eH

Comments:

Key limitations here are that terrain does not affect radio transmissions and alternate communications means are not directly available in SIMNET.

PLATOON ARTEP 17-237-10-MTP

PRODUCE A PLATOON FIRE PLAN (17-3-0104)

Task Rating: M

Subtask/Standard Ratings:

+1 N aH bH cN dH eN fH gN  
+2 P aH bH cP dH eN fH gH hH  
3 H aH bH  
4 H

Comments:

This task is rated "M" because the standards dealing with range cards in subtask 1 cannot be met in SIMNET. Since range cards are not produced on M1-series tanks, this task should be rated "H" for these tanks and "M" for M60-series tanks. Only M1-series tanks are included in SIMNET, so one could argue that this task should be rated "H". The rating is left "M" here, based on reviewers' comments and the way the MTP is written.



PLATOON ARTEP 17-237-10-MTP

EMPLOY COMMAND AND CONTROL MEASURES (17-3-0105)

Task Rating: H

Subtask/Standard Ratings:

1 H aH bH cH  
2 H aH bH cH dH eH fH gH  
+3 P aP bP  
4 H aH bH  
+5 H aH bH cH  
+6 H aH bH cP dH eH

Comments:

None.

PLATOON ARTEP 17-237-10-MTP

PERFORM ASSEMBLY AREA ACTIVITIES (17-3-0200)

Task Rating: N

Subtask/Standard Ratings:

1 M aM bH  
+2 P aH bN cP dP eH fP  
+3 N aN bN cP  
4 N aH bM cN dN  
+5 M

Comments:

The primary limitation here is lack of a dismount capability for guides, quartering party, OPs, and patrols.

PLATOON ARTEP 17-237-10-MTP

EXECUTE A COIL FORMATION (17-3-0201)

Task Rating: H

Subtask/Standard Ratings:

1 H aP bH cH  
2 H (a or b)H cH  
+3 H aH bH cH dH eP fP gM hH

Comments:

Standards 2a and 2b are grouped together and rated "H" because they are connected by an "or" in the MTP. The leader can signal over the radio but not with hand-and-arm signals in SIMNET (he could "wag" the gun tube).

PLATOON ARTEP 17-237-10-MTP

EXECUTE A HERRINGBONE FORMATION (17-3-0202)

Task Rating: H

Subtask/Standard Ratings:

1 H  
2 H (a or b)H cH  
+3 H aH bH cP dH eH fH gM  
4 M aM bM  
5 H aH bH cH dH

Comments:

Standards 2a and 2b are grouped together and rated "H" because they are connected by an "or" in the MTP. The leader can signal over the radio but not with hand-and-arm signals in SIMNET (he could "wag" the gun tube).

The capability to perform actions at a scheduled halt is limited in SIMNET.

PLATOON ARTEP 17-237-10-MTP

EXECUTE A COLUMN FORMATION (17-3-0203)

Task Rating: H

Subtask/Standard Ratings:

1 H (a or b)H cH  
+2 H aH bH cH dP

Comments:

Standards 1a and 1b are grouped together and rated "H" because they are connected by an "or" in the MTP. The leader can signal over the radio but not with hand-and-arm signals in SIMNET (he could "wag" the gun tube).

PLATOON ARTEP 17-237-10-MTP

EXECUTE A STAGGERED COLUMN FORMATION (17-3-0204)

Task Rating: H

Subtask/Standard Ratings:

1 H  
2 H (a or b)H cH  
+3 H aH bH cH dH eP

Comments:

Standards 2a and 2b are grouped together and rated "H" because they are connected by an "or" in the MTP. The leader can signal over the radio but not with hand-and-arm signals in SIMNET (he could "wag" the gun tube).

PLATOON ARTEP 17-237-10-MTP

EXECUTE A WEDGE FORMATION (17-3-0205)

Task Rating: H

Subtask/Standard Ratings:

1 H  
2 H (a or b)H cH  
+3 H aH bH cH dH eP

Comments:

Standards 2a and 2b are grouped together and rated "H" because they are connected by an "or" in the MTP. The leader can signal over the radio but not with hand-and-arm signals in SIMNET (he could "wag" the gun tube).

PLATOON ARTEP 17-237-10-MTP

EXECUTE A VEE FORMATION (17-3-0206)

Task Rating: H

Subtask/Standard Ratings:

1 H  
2 H (a or b)H cH  
+3 H aH bH cH dH eP

Comments:

Standards 2a and 2b are grouped together and rated "H" because they are connected by an "or" in the MTP. The leader can signal over the radio but not with hand-and-arm signals in SIMNET (he could "wag" the gun tube).

PLATOON ARTEP 17-237-10-MTP

EXECUTE A LINE FORMATION (17-3-0207)

Task Rating: H

Subtask/Standard Ratings:

1 H  
2 H (a or b)H cH  
+3 H aH bH cH dH eP

Comments:

Standards 2a and 2b are grouped together and rated "H" because they are connected by an "or" in the MTP. The leader can signal over the radio but not with hand-and-arm signals in SIMNET (he could "wag" the gun tube).

PLATOON ARTEP 17-237-10-MTP

EXECUTE AN ECHELON FORMATION (17-3-0208)

Task Rating: H

Subtask/Standard Ratings:

1 H  
2 H (a or b)H cH  
+3 H aH bH cH dH eH fP

Comments:

Standards 2a and 2b are grouped together and rated "H" because they are connected by an "or" in the MTP. The leader can signal over the radio but not with hand-and-arm signals in SIMNET (he could "wag" the gun tube).

PLATOON ARTEP 17-237-10-MTP

EXECUTE TRAVELING (17-3-0209)

Task Rating: H

Subtask/Standard Ratings:

1 H aH bH  
+2 H aH bH cP dH eH

Comments:

None.

PLATOON ARTEP 17-237-10-MTP

EXECUTE TRAVELING OVERWATCH (17-3-0210)

Task Rating: H

Subtask/Standard Ratings:

1 H aH bH  
2 H  
3 H aH bP cH  
4 H  
+5 H aP bH cH  
+6 H aH bP cH dH eH  
7 H aH bH cH

Comments:

None.

PLATOON ARTEP 17-237-10-MTP

EXECUTE BOUNDING OVERWATCH (17-3-0211)

Task Rating: P

Subtask/Standard Ratings:

1 H     aH bH  
2 N     aN (b or c)H dN  
+3 H     aP bP cH dH eH  
+4 H     aP bH cP dH eH

Comments:

Standards 2b and 2c are grouped together and rated "H" because they are connected by an "or" in the MTP. The leader can give a command over the radio but not by pointing in SIMNET (he could signal with the gun tube). Subtask 2 is rated "N" because proper hand-and-arm signals cannot be given in SIMNET.

PLATOON ARTEP 17-237-10-MTP

CONDUCT A TACTICAL ROAD MARCH (17-3-0212)

Task Rating: P

Subtask/Standard Ratings:

1 H     aH bH  
2 H     aH bH cH dP eH fH  
3 M  
+4 H     aP bH cH dH eH fH gH  
+5 M     aN bH cM dM eP fM

Comments:

Ability to assume REDCON levels (subtask 3) is limited in SIMNET (see task 17-3-0101).

There are several limitations (actions at a halt, obstacles, dismounted guides) to the capability to conduct a road march (subtask 5) in SIMNET.

PLATOON ARTEP 17-237-10-MTP

MOVE IN A BUILT-UP AREA (17-3-0213)

Task Rating: N

Subtask/Standard Ratings:

1 N aN bN cN dN eN fN  
2 N  
+3 N aN bN cN dN eN fN

Comments:

All standards and subtasks are rated "N" due to the lack of a real built-up area on the SIMNET battleground.

PLATOON ARTEP 17-237-10-MTP

ASSIST A PASSAGE OF LINES (17-3-0214)

Task Rating: M

Subtask/Standard Ratings:

+1 P aH bH cM dH eP fH gH hH iN  
+2 H aM bP cH dH eH fH  
+3 M aH bH cM dN  
+4 M aM bH cN

Comments:

The lack of barriers, minefields, and obstacles in SIMNET is the primary limitation for this task.



PLATOON ARTEP 17-237-10-MTP

PERFORM A PASSAGE OF LINES (17-3-0215)

Task Rating: P

Subtask/Standard Ratings:

1 M aM bP  
2 M aH bH cH dH eP fP gP hN iM jH kN lP mH  
3 H aH bH cH dH eH fH gH hH iH jP  
4 P aM bH cP  
+5 P aH bM cN dH eH fH  
+6 H aH bH cM dH

Comments:

Primary limitations here include recognition signals and lack of obstacles and NBC conditions.

PLATOON ARTEP 17-237-10-MTP

CONDUCT REHEARSALS FOR A MISSION (17-3-0216)

Task Rating: P

Subtask/Standard Ratings:

1 H  
2 H aH bH cH dH eH  
3 P aH bM cH dH eP fO  
4 M aM bH cO dM eO fM gM  
+5 H  
6 O  
7 H aH bH

Comments:

This task can be performed in conjunction with SIMNET exercises, although several of the standards are not directly supported by the simulation. Rehearsals can be conducted on the floor between simulators.

PLATOON ARTEP 17-237-10-MTP

PERFORM PLATOON FIRE AND MOVEMENT (17-3-0217)

Task Rating: H

Subtask/Standard Ratings:

1 H (a or b)H  
+2 P aP bH cP dP  
+3 H aP bH cH  
+4 P aH bH cP dP eP  
5 H

Comments:

Standards 1a and 1b are grouped together and rated "H" because they are connected by an "or" in the MTP.

This task barely meets the criteria for being rated "H". There are limitations in cover and concealment and weapon systems available (no machine guns).

PLATOON ARTEP 17-237-10-MTP

PERFORM RECONNAISSANCE BY FIRE (17-3-0218)

Task Rating: M

Subtask/Standard Ratings:

1 P aH bP cP  
2 P aH bP  
3 H  
+4 H  
+5 N aN bN cH dH eH

Comments:

The primary limitation here is lack of machine guns.

PLATOON ARTEP 17-237-10-MTP

PERFORM AN ATTACK BY FIRE (17-3-0219)

Task Rating: H

Subtask/Standard Ratings:

1 H aH bH  
+2 P aH bN cH  
+3 H aH bP cP dH eH fH

Comments:

The only major limitation here is lack of machine guns.

PLATOON ARTEP 17-237-10-MTP

ASSAULT AN ENEMY POSITION (17-3-0220)

Task Rating: P

Subtask/Standard Ratings:

1 P aH bP cP dH  
2 P aP bP cP dH eH  
+3 H aH bP cH dH  
+4 H aH bH cP dP eP fH gH  
+5 P aP bN cH  
+6 M aM bH cM

Comments:

The primary limitations here include lack of mines, obstacles, and prepared positions.

PLATOON ARTEP 17-237-10-MTP

EXECUTE ACTIONS ON CONTACT (17-3-0221)

Task Rating: P

Subtask/Standard Ratings:

+1 P aP bN cP dH  
+2 P aH bP cH dN  
+3 P  
4 H  
+5 P aH bP cP dM  
6 H aH bH cH dH

Comments:

Primary limitations here include lack of machine guns and on-board smoke, along with inability to perform all aspects of platoon battle drills.

PLATOON ARTEP 17-237-10-MTP

OCCUPY A PLATOON BATTLE POSITION (17-3-0222)

Task Rating: N

Subtask/Standard Ratings:

1 N aP bN cN  
2 M aM bM cM dM eM fM gM hM iP  
3 H  
+4 M aN bP cP dN eH fM gH hH  
5 N aN bN cN dN eN fN gN hN iN  
6 P aP bH cN  
7 P aP bH cP  
8 O aO bO cO dO eO  
9 N aM bN  
10 H  
+11 P aP bH cP dP eP fP gN  
+12 P aP bP  
13 H  
+14 M aM bP

Comments:

Major limitations here include the lack of a dismount capability, the inability to improve positions, and the lack of obstacles. The occupation of battle positions needs to be trained in a field setting.

PLATOON ARTEP 17-237-10-MTP

DISPLACE TO A SUBSEQUENT BATTLE POSITION (17-3-0223)

Task Rating: P

Subtask/Standard Ratings:

1	P	aH	bH	cO	dM	eH
+2	H	aH	bH	cH	dP	
+3	P	aH	bH	cH	dP	eN
+4	H	aH	bH	cP	dH	
+5	P	aP	bP	cP	dP	
+6	P	aP	bH	cP	dH	
+7	P	aP	bH	cH	dP	
8	P	aP	bP	cM		
+9	M	aH	bN			

Comments:

There are several limitations to performance of this task, with many of them relating to the availability of covered and concealed routes and positions.

PLATOON ARTEP 17-237-10-MTP

REACT TO AN ENEMY DISMOUNTED ATTACK (17-3-0224)

Task Rating: N

Subtask/Standard Ratings:

+1	N	aN	bN	
+2	P	aP	bP	cP
3	H			
4	N			
+5	M	(a, b, c, or d)	M	
6	P			
7	N			
8	H			
9	H	(a, b, or c)	H	
10	N	aO	bM	cN
11	P			

Comments:

Standards under subtasks 5 and 9 are grouped and rated together because they are connected by "or" in the MTP.

The primary limitation to performing this task in SIMNET is the lack of dismounted forces.

PLATOON ARTEP 17-237-10-MTP

EXECUTE A PLATOON DEFENSIVE MISSION (17-3-0225)

Task Rating: P

Subtask/Standard Ratings:

1 H	aH bH
2 H	aH bH cH dH eH
3 P	
+4 M	aM bM cN
+5 H	aP bH cH
+6 P	
7 H	aH bP cM dH eH
8 H	aH bH
+9 P	aH bP cP dH eH fP gP
10 H	aH bP cH
+11 H	aH bH cP
12 P	aH bP cM

Comments:

The primary limitation here relates to the lack of dismounted OPs in SIMNET (subtask 4).

PLATOON ARTEP 17-237-10-MTP

ASSIST A RELIEF IN PLACE (17-3-0226)

Task Rating: N

Subtask/Standard Ratings:

1 P	
2 P	
3 M	aM bM
+4 H	aH bH cP
+5 P	aP bH
+6 N	aN bN cN
+7 N	aP bN cH dN
8 H	aM bH cH

Comments:

This task is rated "N" because two critical subtasks are rated "N". Primary limitations include the lack of limited visibility, obstacles, and minefields, along with the inability to exchange materiel.

PLATOON ARTEP 17-237-10-MTP

CONDUCT HASTY OCCUPATION OF A BATTLE POSITION (17-3-0227)

Task Rating: P

Subtask/Standard Ratings:

1 P aH bP  
+2 P  
3 H aH bH cH dH eP  
+4 P aP bH  
5 P  
6 P aP bH  
7 N

Comments:

Primary limitations here include the difficulty in finding hull-down and turret-down positions on the SIMNET battleground and the inability to improve positions.

PLATOON ARTEP 17-237-10-MTP

EMPLOY CAMOUFLAGE AND COUNTERSURVEILLANCE MEASURES (17-3-0301)

Task Rating: N

Subtask/Standard Ratings:

+1 M aP bO  
+2 N aN bN cN dN eN fN  
3 M  
4 N aN bN cN dN  
5 N aN bN  
+6 N  
+7 N aN bN cN dN eN fN  
8 N aN bN cN  
+9 N aN bM cN dN

Comments:

Platoons cannot employ camouflage or enforce noise, light, and litter discipline in SIMNET. This task needs to be trained in a field setting.

PLATOON ARTEP 17-237-10-MTP

ESTABLISH AN OBSERVATION POST (17-3-0302)

Task Rating: N

Subtask/Standard Ratings:

1 P aP bP cP dP eM fP  
2 P aP bP cP dP eN fP  
3 O aO bO cO dO eO fO gO  
+4 N aN bN cN dN eN  
+5 N aN bN cN dN eN fN gN hN  
6 M aP bP cP dN eN fH gH hH iH  
+7 N aP bM cP dN eN fP gO hN iN jP

Comments:

Platoons cannot establish and operate a hasty or deliberate observation post in SIMNET. There are too many limitations in the equipment that can be used and in the capability to camouflage and improve positions.

PLATOON ARTEP 17-237-10-MTP

PROCESS ENEMY PRISONERS OF WAR (19-3-C004)

Task Rating: N

Subtask/Standard Ratings:

1 N  
+2 N aN bN cN dN  
+3 N aN bN cN dN  
+4 N aN bN  
+5 N aN bN cN dN  
+6 N aN bN  
+7 N aN bN cN dN  
8 N

Comments:

Platoons cannot establish holding areas or process prisoners of war in SIMNET. This task is not appropriate for performing in the simulation.



PLATOON ARTEP 17-237-10-MTP

PROCESS CAPTURED DOCUMENTS AND EQUIPMENT (19-3-C005)

Task Rating: N

Subtask/Standard Ratings:

+1 N  
+2 N aN bN cN dN eN fN  
3 N  
+4 N aN bN  
+5 N

Comments:

This task is not appropriate for performing in the simulation.

PLATOON ARTEP 17-237-10-MTP

TAKE ACTIONS AT AN OBSTACLE (17-3-0401)

Task Rating: M

Subtask/Standard Ratings:

+1 M  
+2 P aH bM cP  
3 N  
4 H aH bH  
+5 P aP bP cH  
6 M aP bH cO dM

Comments:

On-board smoke is not available in SIMNET (subtask 3).  
Only natural nonreinforced obstacles are present on the SIMNET terrain, and there are few of those except for unfordable streams. This task thus gets a "low minimal" rating.

PLATOON ARTEP 17-237-10-MTP

EXECUTE A PREPARED OBSTACLE (17-3-0402)

Task Rating: N

Subtask/Standard Ratings:

1 N aN bN cN  
2 N aN bN cN dN eN  
3 N aN bN  
4 N aN bN  
5 N aN bN cN  
6 N  
7 N

Comments:

This task is not appropriate for performing in the simulation.

PLATOON ARTEP 17-237-10-MTP

CONSTRUCT A HASTY OBSTACLE (17-3-0403)

Task Rating: N

Subtask/Standard Ratings:

1 P aP bP cH dM  
2 P aP bP  
3 N  
+4 N aN bN  
5 N  
+6 N

Comments:

Platoons can plan and coordinate but not actually construct obstacles in SIMNET.

PLATOON ARTEP 17-237-10-MTP

EMPLACE A HASTY PROTECTIVE MINEFIELD (17-3-0404)

Task Rating: N

Subtask/Standard Ratings:

1 P aP bP cH dM eH  
2 P  
3 N  
+4 N aN bN cN dN eN  
+5 N  
+6 N  
+7 N  
+8 N aN bN cN

Comments:

Platoons can plan and coordinate but not actually emplace minefields in SIMNET.

PLATOON ARTEP 17-237-10-MTP

PREPARE FOR A CHEMICAL ATTACK (03-3-C011)

Task Rating: N

Subtask/Standard Ratings:

+1 P aH bM  
+2 O aO bO cN  
3 N aN bN cH dP  
+4 N aN bN  
5 M aM bM  
+6 N aN bN  
7 O

Comments:

Little of this task can be performed in SIMNET.

PLATOON ARTEP 17-237-10-MTP

PREPARE FOR A FRIENDLY NUCLEAR STRIKE (03-3-C018)

Task Rating: N

Subtask/Standard Ratings:

+1 P aH bH cN

+2 N aM bN cN dN eN fN gH hN iN

Comments:

Platoons can disseminate warnings but cannot implement protective measures.

PLATOON ARTEP 17-237-10-MTP

PREPARE FOR A NUCLEAR ATTACK (03-3-C012)

Task Rating: N

Subtask/Standard Ratings:

+1 N aH bM cN dN eN fN gH hN iN

+2 N aN bN

Comments:

Little of this task can be performed in SIMNET.

PLATOON ARTEP 17-237-10-MTP

RESPOND TO THE INITIAL EFFECTS OF A NUCLEAR ATTACK (17-3-0408)

Task Rating: N

Subtask/Standard Ratings:

+1 N aN bN cN dO eO fN gN hN iN  
2 N  
3 N

Comments:

Nuclear attacks are not represented in SIMNET.

PLATOON ARTEP 17-237-10-MTP

RESPOND TO THE RESIDUAL EFFECTS OF A NUCLEAR ATTACK (17-3-0409)

Task Rating: N

Subtask/Standard Ratings:

1 N aN bN cN dO eO fO  
+2 N aN bM cO  
3 N aH bH cN dN  
4 N aN bM

Comments:

Nuclear attacks are not represented in SIMNET.

PLATOON ARTEP 17-237-10-MTP

CROSS A RADIOLOGICALLY CONTAMINATED AREA (03-3-C013)

Task Rating: N

Subtask/Standard Ratings:

1 P aO bP cP  
+2 N aN bN cO dO eH fN gP hH  
+3 M  
+4 N aN bM

Comments:

Platoons cannot prepare for crossing a contaminated area or conduct decontamination in SIMNET.

PLATOON ARTEP 17-237-10-MTP

RESPOND TO A CHEMICAL AGENT ATTACK (03-3-C015)

Task Rating: N

Subtask/Standard Ratings:

+1 N aN bN cO  
+2 N aN bN cN dN  
+3 N aN bN cN dN  
+4 N aO bN cN dP  
+5 N aN bN cN dN eN fN  
+6 N aN bN cN dN eN fN gN  
7 O aO bO  
8 N aN bN

Comments:

Chemical agent attacks are not represented in SIMNET.

PLATOON ARTEP 17-237-10-MTP

CONDUCT CHEMICAL RECONNAISSANCE (17-3-0412)

Task Rating: N

Subtask/Standard Ratings:

+1 O aO bO  
+2 N aN bN  
3 N aN bN  
+4 N aN bN cN dN eN fN gN  
+5 N aH bN cH dH eP fN gN  
+6 N aN bN cN dN eN  
7 H

Comments:

Little of this task can be performed in SIMNET.

PLATOON ARTEP 17-237-10-MTP

CROSS A CHEMICALLY CONTAMINATED AREA (03-3-C034)

Task Rating: N

Subtask/Standard Ratings:

+1 P aO bP cP  
+2 N aO bP cM dN eN  
+3 M aM bM  
+4 N aO bN cH

Comments:

Platoon cannot prepare for crossing the area or conduct decontamination in SIMNET.

PLATOON ARTEP 17-237-10-MTP

PERFORM CHEMICAL DECONTAMINATION (03-3-C016)

Task Rating: N

Subtask/Standard Ratings:

+1 N aN bN cN  
+2 N aN bN cN dN eN fN gN hN iN  
3 M aH bN

Comments:

This task is not appropriate for performing in the simulation.

PLATOON ARTEP 17-237-10-MTP

PERFORM RESUPPLY OPERATIONS (17-3-0601)

Task Rating: N

Subtask/Standard Ratings:

+1 O aO bO  
+2 P aP bP cH dP  
+3 N aM bN cN dM eM fN gM hN iP jP  
+4 P aP bH cH dH eP fP gP

Comments:

Platoons can resupply using the service station method (subtask 4), but not using the tailgate method (subtask 3).



PLATOON ARTEP 17-237-10-MTP

PREPARE AND EVACUATE CASUALTIES (08-3-C019)

Task Rating: O

Subtask/Standard Ratings:

+1 O aO bO  
+2 O aP bO cO  
+3 O aO bM cN dO eO fO gP hO  
+4 O aO bO  
+5 O aO bO

Comments:

All subtasks must be performed outside the simulation.

PLATOON ARTEP 17-237-10-MTP

PERFORM MAINTENANCE OPERATIONS (17-3-0603)

Task Rating: N

Subtask/Standard Ratings:

1 M aM bM cM  
+2 N aN bN cP dP  
+3 N aN bN cN dN eN  
+4 N aN bP cN  
5 N

Comments:

All that can be performed in the simulation is limited reporting and coordination.

PLATOON ARTEP 17-237-10-MTP

PERFORM FIELD SANITATION OPERATIONS (08-3-C023)

Task Rating: N

Subtask/Standard Ratings:

+1 N aN bN cN  
2 N aN bN cN  
+3 N  
4 N aN bN cN dN

Comments:

This task is not appropriate for performing in the simulation.

PLATOON ARTEP 17-237-10-MTP

TAKE PASSIVE AIR DEFENSE MEASURES (44-3-C001)

Task Rating: P

Subtask/Standard Ratings:

+1 M aM bN cP dH eM fM gH  
+2 H aH bH cH dP eM fH

Comments:

There are limitations in the cover and concealment available, the capability to man OPs, and the capability to visually identify Threat aircraft.

PLATOON ARTEP 17-237-10-MTP

TAKE ACTIVE AD MEASURES AGAINST HOSTILE AIRCRAFT (44-3-C002)

Task Rating: M

Subtask/Standard Ratings:

+1 M	aP	bP	cM	dH	eM	fM	gM	hH
+2 M	aP	bP	cP	dM	eH	fM	gM	hM
3 M	aM	bH	cM	dM	eM	fP		
+4 M	aP	bP	cH	dN	eM	fM	gM	hH
5 P	aP	bO	cM	dH	eH			

Comments:

There are limitations in the weapons available (no small arms) and in the capability to visually identify Threat aircraft.

**APPENDIX B**  
**Company Team SIMNET Assessment**

COMPANY TEAM ARTEP 71-1-MTP

OCCUPY ASSEMBLY AREA (17-2-0325)

Task Rating: N

Subtask/Standard Ratings:

1 M	aM bH cN
2 N	aN bN cN dO eP fN gN
3 N	aH bM cM dH eN fN
+4 P	aH bM cH dH eO
5 N	aP bP cN dN eP fM
6 N	aN bN cN dN eN
+7 N	aH bN cN dN
+8 N	aM bN
+9 N	aN bP cM dN
+10 M	aP bM cM
11 N	aN bH cN dN eH fH gP hH iH jN kN lM mH
12 N	aN bN cN

Comments:

There are numerous limitations to performing this task in SIMNET. Primary ones include the lack of a dismounted quartering party and the inability to perform perimeter defense.

COMPANY TEAM ARTEP 71-1-MTP

PERFORM TACTICAL MOVEMENT (17-2-0301)

Task Rating: M

Subtask/Standard Ratings:

+1 H	aH bH cH dH eH fH gH
+2 P	aP bH cP dP eP fH gH hP
+3 H	aM bM cH dH eH fH gH hH
+4 H	aH bH cH dH eH gH
+5 H	aH bH cH
6 N	aN bH cP dN eM
+7 P	aP bH cP dN eP fP gP hH iH jP kH
7 N	aN bN cN dN eN fN gN hN iN
8 H	aH bH

Comments:

Primary limitations here are the inability to take action at halts (subtask 6) and the lack of a built-up area (subtask 8).

Note that there are misnumberings for this task in the MTP; there is no standard 4f and subtask number 7 is repeated.

COMPANY TEAM ARTEP 71-1-MTP

PERFORM TACTICAL ROAD MARCH (17-2-0302)

Task Rating: P

Subtask/Standard Ratings:

+1 P aH bH cP dH eM fP gP hH iM jP kN  
2 N aN bM cO dP eO fP gP hH  
3 P aH bM  
+4 P aH bH cH dH eN fP gH  
+5 P aH bH cP dH eM fP gH hM  
+6 H aP bH cH dH  
+7 P aM bH

Comments:

The primary limitation here is in preparing for the road march (subtask 2).

COMPANY TEAM ARTEP 71-1-MTP

PERFORM RECONNAISSANCE (17-2-0202)

Task Rating: P

Subtask/Standard Ratings:

1 H aH bH cH  
+2 P aP bH cH dO  
3 H aH bH cH dH  
4 M aP bM  
+5 M aP bM  
6 P aP bP cH  
7 M aN bP cH

Comments:

There are several limitations here, including the lack of attached intelligence assets. This task barely meets the criteria for a "P" rating.

COMPANY TEAM ARTEP 71-1-MTP

PERFORM LOCAL CHEMICAL RECONNAISSANCE (03-2-C025)

Task Rating: N

Subtask/Standard Ratings:

+1 O aO bO  
2 O aN bO cO dO eO  
+3 N aN bN  
4 N aN bN cN dN

Comments:

Chemical warfare is not represented in SIMNET.

COMPANY TEAM ARTEP 71-1-MTP

PERFORM LOCAL RADIOLOGICAL RECONNAISSANCE (03-2-C032)

Task Rating: N

Subtask/Standard Ratings:

+1 O aO bO cO  
2 O aO bO cO dO eO fO gO hO  
+3 N aN bN cN dN  
4 N aN bN cN dN

Comments:

Nuclear attacks are not represented in SIMNET.

COMPANY TEAM ARTEP 71-1-MTP

PERFORM PASSAGE OF LINES (17-2-0303)

Task Rating: P

Subtask/Standard Ratings:

+1 P aP bH cP  
2 P aH bH cH dH eP fH gH hH iH jN kH lP mP nH  
+3 P aH bP cH dM eN fM gP hH iP jM kP lH mH nH oP  
+4 P aP bH  
5 N aH bH cN dN eH  
6 H aH bH cH dH  
+7 P aH bH cH dP eH fP gH hP iH jN kH lM mH nP  
8 H aH bH cP  
9 M aH bN cM dH eH fN gH hH iP  
10 M aP bP cP dH eM fP gH hH iH jN kN lH mH nP

Comments:

There are several limitations here, with the primary ones relating to preparing for the passage of lines (subtask 5).

COMPANY TEAM ARTEP 71-1-MTP

ASSIST PASSAGE OF LINES (17-2-0327)

Task Rating: M

Subtask/Standard Ratings:

+1 H  
2 P aP bH cM dM eP fH gH hM iP  
+4 N  
5 P  
6 H  
7 M  
8 M  
9 H  
10 P  
+11 H

Comments:

The primary limitations here are the lack of obstacles and mines (subtask 4) and the lack of dismounted guides (subtasks 7 and 8).

Note that there is a misnumbering of subtasks in the MTP; there is no subtask 3.



COMPANY TEAM ARTEP 71-1-MTP

PERFORM ASSAULT POSITION ACTIVITIES (17-2-0328)

Task Rating: N

Subtask/Standard Ratings:

1 P aH bH CH dP eN fH  
2 N aH bP CH dH eN fN  
3 M aH bH CM dN  
4 N aN bN CP  
5 N

Comments:

The primary limitation here is lack of dismounted infantry.

COMPANY TEAM ARTEP 71-1-MTP

PERFORM ACTIONS ON CONTACT (17-2-0304)

Task Rating: H

Subtask/Standard Ratings:

+1 H aH bP CH  
2 P aP bH  
+3 P aP bH CH dM  
+4 P aH bP CN dH eH fH gH  
+5 H aH bH  
+6 H aH bH CH dH  
+7 H aH bH CH dH  
+8 H aH bH CP dH  
+9 H aH bH CH

Comments:

There are few limitations to performing this task in SIMNET.

COMPANY TEAM ARTEP 71-1-MTP

SUPPORT BY FIRE (17-2-0306)

Task Rating: P

Subtask/Standard Ratings:

+1 P aH bP cM dH eP fM  
2 H aH bH cP  
+3 H aH bH cH dH eH fP  
4 P aP bP cH  
+5 P aP bM  
6 H aH bH cH  
+7 P aP bH  
+8 P aP bP cH dH  
9 H aH bP cH

Comments:

There are several limitations to performing this task in SIMNET, which result in it barely failing to meet the criteria for an "H" rating. One important limitation is the lack of machine guns and special weapons.

COMPANY TEAM ARTEP 71-1-MTP

OCCUPY OBJECTIVE RALLY POINT (17-2-0307)

Task Rating: M

Subtask/Standard Ratings:

1 P aH bP cH dM  
2 H aH bH cH dP eP fH gH hH iP jM kH  
+3 P aP bP  
4 P aM bH  
+5 N aM bM cP dH eP fP gH hN iH jO kN lO

Comments:

The primary limitation here is the inability to prepare and improve positions when occupying the objective rally point.

Note that the overall task condition in the MTP states that the company team is operating in a dismounted role. However, 4 of the 5 subtasks can be performed mounted. This task thus barely meets the criteria for an "M" rating. If the overall task condition was entered into the assessment, the task would be rated "N".

COMPANY TEAM ARTEP 71-1-MTP

PERFORM ATTACK POSITION ACTIVITIES (17-2-0329)

Task Rating: H

Subtask/Standard Ratings:

- 1 H aH bH
- 2 H aH bH cH
- 3 P aH bP cP dP eH fP gM
- 4 H aH bH cH

Comments:

The only limitations to performing this task in SIMNET deal with occupying the attack position (subtask 3).

COMPANY TEAM ARTEP 71-1-MTP

ASSAULT AN ENEMY POSITION (DISMOUNTED) (17-2-0310)

Task Rating: N

Subtask/Standard Ratings:

- +1 P aP bH cM dH eM fH gH hP
- +2 P aP bM cM dH eH fH
- +3 P aH bP cP dP eH
- 4 M aP bN cP
- 5 N aN bP cP dN
- 6 N aN bP cP dN
- 7 P

Comments:

The primary limitation here is the lack of dismounted infantry for the assault.

COMPANY TEAM ARTEP 71-1-MTP

ASSAULT AN ENEMY POSITION (MOUNTED) (17-2-0326)

Task Rating: P

Subtask/Standard Ratings:

+1 P aP bH cM dH eM fH gH hP

+2 H aH bM cM dH eH

+3 M aH bP cP dP eH fP gP hH iN jH kN lN mP

4 P

Comments:

Primary limitations here include the lack of obstacles and bunkers and the lack of dismounted infantry.

COMPANY TEAM ARTEP 71-1-MTP

PERFORM AN ATTACK BY FIRE (17-2-0311)

Task Rating: P

Subtask/Standard Ratings:

+1 P aP bP cP dP eH fM

+2 H aH bH cH

+3 H aH bH cH dP

4 P aH bN cH

+5 P aP bP cP dH

6 H aH bH cH

Comments:

The most important limitation here is lack of machine guns.

COMPANY TEAM ARTEP 71-1-MTP

PERFORM RAID (MOUNTED AND DISMOUNTED) (17-2-0308)

Task Rating: M

Subtask/Standard Ratings:

1	P	aP	bH																
2	P	aH	bP	cP	dP	eP													
3	H	aH	bP	cH															
4	H	aH	bP	cH	dH	eH													
5	P	aP	bP																
6	P	aP	bP	cH															
7	P	aH	bM																
+8	N	aP	bN	cN	dN	eN	fH	gP	hN	iH	jN	kN							
9	P	aH	bH	cN	dM	eP	fP	gH	hP										
+10	M	aN	bM	cP	dP														
11	M	aH	bM	cP	dH	eM	fO												
12	H	aH	bH	cH															

Comments:

The primary limitation here is the inability to conduct a dismounted raid. A mounted raid could be conducted at the "p" level.

COMPANY TEAM ARTEP 71-1-MTP

PERFORM AMBUSH (17-2-0309)

Task Rating: M

Subtask/Standard Ratings:

+1	P	aP	bH	cM	dP	eP	fP
2	P	aP	bP	cM	dH		
3	M						
4	P	aP	bH	cH	dH	eP	fH gP hP iP
5	H	aH	bH				
6	M	aH	bP	cN	dP	eH	fN gH hH iH
+7	H	aH	bH	cH	dH		
8	N	aP	bN	cP	dN	eH	fH
+9	N	aN	bN	cH			
+10	H	aP	bH	cH	dH	eH	fH
+11	P	aH	bH	cP	dP	eH	fN
12	H	aH	bH	cH	dH		
13	N	aM	bN				
+14	H	aP	bH	cP	dH	eH	
15	P	aM	bH				

Comments:

There is no dismounted infantry or capability to prepare the site or employ OPSEC.

Note that the overall task condition states that the company team is dismounted when performing this task. However, the subtask ratings barely meet the criteria for an "M" rating with the company team mounted. This task thus receives a "low minimal" rating. If the overall task condition was entered into the assessment, the task would be rated "N".

COMPANY TEAM ARTEP 71-1-MTP

PERFORM AIR ASSAULT (17-2-0331)

Task Rating: N

Subtask/Standard Ratings:

1 M aH bO cP  
2 H  
3 O aO bO cO dO eO  
4 O aO bO cO dO eO fO gO hO iO  
5 O aO bO cO dO eO fO gO hO  
6 O aO bO cO dN  
+7 O aO bO cN dO  
+8 M aN bH  
+9 N aN bN cN dN eN  
+10 N aP bN cM dH eN

Comments:

SIMNET does not include sufficient aviation assets to support performance of this task.

COMPANY TEAM ARTEP 71-1-MTP

PERFORM HASTY RIVER/GAP CROSSING (17-2-0332)

Task Rating: N

Subtask/Standard Ratings:

+1 O aO bO cO dO eO fO gO  
2 P aP bH  
3 H  
4 M aP bM cP dN  
5 M aH bP cH dH eN fN gM hM  
6 O aO bO cO dO eO  
7 N aH bP cN dN eN fN gN  
8 H aH bP cH

Comments:

This task cannot be performed in SIMNET due to the lack of an engineer squad with an AVLB.

COMPANY TEAM ARTEP 71-1-MTP

PERFORM SCREEN OPERATIONS (17-2-0312)

Task Rating: M

Subtask/Standard Ratings:

+1 P aH bH cP dH eH fO gP  
2 H aH bH cP dH eH  
3 P aP bP cH  
4 P aP bP cH  
+5 N aN bN cM dP  
+6 M aH bH cN dM  
7 P aP bP cP dP eP fH gP hH  
8 P aP bN cH dH eH fH gP

Comments:

Company team elements cannot occupy OPs on the screen line in SIMNET (subtask 5).

COMPANY TEAM ARTEP 71-1-MTP

PERFORM GUARD OPERATION (17-2-0330)

Task Rating: H

Subtask/Standard Ratings:

1 H aH bH cP dH  
+2 P aH bH cN dM eP  
+3 H aH bH cH dP eH fH gH  
4 H

Comments:

The most serious limitations here relate to night-observation devices and the conduct of reconnaissance (standards 2c and 2d).

Note that this task does not include a subtask addressing occupation of OPs, whereas the previous task (screen operations) does. Inclusion of such a subtask here would result in a lower rating.



COMPANY TEAM ARTEP 71-1-MTP

CROSS A RADIOLOGICALLY CONTAMINATED AREA (17-2-0314)

Task Rating: N

Subtask/Standard Ratings:

1 O aO bO cH  
2 N aN bN cN  
+3 N aN bN  
+4 M aM bH cH dN  
+5 N aH bN cN dN eH

Comments:

Company teams cannot monitor for nuclear contamination, prepare vehicles for crossing a contaminated area, or conduct decontamination in SIMNET.

COMPANY TEAM ARTEP 71-1-MTP

CROSS A CHEM/BIO CONTAMINATED AREA (17-2-0313)

Task Rating: N

Subtask/Standard Ratings:

1 O aO bO cH  
+2 O aO bO  
+3 N aN bN cN dN  
+4 N aN bN  
5 N aM bN cH dM eH fN gN  
6 P aH bN cH

Comments:

Company teams cannot monitor for chemical contamination, prepare for movement through a contaminated area, or properly move through a contaminated area in SIMNET.

COMPANY TEAM ARTEP 71-1-MTP

DEFEND (17-2-1021)

Task Rating: N

Subtask/Standard Ratings:

+1 P	aH bP cH dP eP fM gH hP iH jH kH lM mM nO
2 N	
+3 H	aP bH cH
+4 ..	aP bH cM dM eM fM gP hN iM jP kN lP mP nN oN pP qP
5 M	aM bM cP
6 N	aN bP cP dN
7 M	aM bH cM
8 H	aH bH cH dH
9 P	aH bH cH dP eP fP
10 N	aM bN cO dN
11 N	aN bN cO dO
+12 P	aH bO cH dP eH
+13 P	aP bN cP dM eM fH gH hH iH
+14 N	aN bN cN dN
15 H	aH bH cP
16 P	
17 H	aH bH cH

Comments:

Major limitations here include the inability to occupy an assembly area (see task 17-2-0325), the inability to improve positions, the lack of minefields and obstacles, the inability to stockpile ammunition and supplies, and the lack of a dismounted enemy. Due to these limitations, defense in SIMNET must be hasty.

Note that 29% of the subtasks for this task are rated "N". This barely exceeds the criterion of no more than 25% of subtasks rated "N" for a task to receive an "M" rating.

COMPANY TEAM ARTEP 71-1-MTP

LINKUP (17-2-0318)

Task Rating: P

Subtask/Standard Ratings:

+1 H aH bH cP dH eH fH  
+2 H aM bH cH dH eH fH  
+3 P aP bN cH dP  
4 N aN bP cN dM  
+5 H aM bH cH  
6 H aH bH cP dM eH fH gH  
+7 P aP bP cH dM eH  
8 H aH bM cH

Comments:

The primary limitation here is the inability to secure and mark the linkup point (subtask 4).

COMPANY TEAM ARTEP 71-1-MTP

BREAKOUT FROM ENCIRCLEMENT (17-2-0319)

Task Rating: M

Subtask/Standard Ratings:

1 P aH bP cH dP eM  
2 H aH bH  
+3 N aP bH cN dN eP fP  
+4 M aH bP cP dP eN fH gH hH iN jO kH lH mM  
5 H aH bH cH

Comments:

Major limitations here include the inability to destroy equipment and make provisions for personnel left behind.

COMPANY TEAM ARTEP 71-1-MTP

INFILTRATE/EXFILTRATE (17-2-0320)

Task Rating: M

Subtask/Standard Ratings:

+1 H aP bH cH dH eH fH gH  
+2 M aP bP cH dH eH fO gN hH iH  
3 N aM bN cN  
+4 M aM bP cM dP eH fN gP hH iP jP kH lN  
+5 P

Comments:

There are numerous limitations here, including the lack of visual signals and dismount capability.

Note that the overall task condition in the MTP states that the company team moves dismounted while performing this task. The analysis of subtasks and standards above indicates that the task can be performed to a minimal level while mounted. If the overall task condition was entered into the assessment, the task rating would be "N".

COMPANY TEAM ARTEP 71-1-MTP

DELAY (17-2-0321)

Task Rating: M

Subtask/Standard Ratings:

+1 M aH bP cH dH eP fN gH hH iO  
2 M aM bO cH  
3 N aN bM cN dN eN fM gN  
+4 H aP bH cH dH eM fH gP hH iH  
5 M aP bN

Comments:

The primary limitations here involve preparation for the delay (subtask 3).

COMPANY TEAM ARTEP 71-1-MTP

WITHDRAW NOT UNDER ENEMY PRESSURE (17-2-0322)

Task Rating: M

Subtask/Standard Ratings:

+1 H aP bP cP dH eP fH gH hH iH jH  
2 N aH bN cN dH  
+3 M aH bP cN dH eH fM gH hN  
4 M aN bH

Comments:

Primary limitations here relate to occupation of the assembly area and movement of unneeded equipment and supplies.

COMPANY TEAM ARTEP 71-1-MTP

WITHDRAW UNDER ENEMY PRESSURE (17-2-0323)

Task Rating: P

Subtask/Standard Ratings:

1 P aM bP cP dP eH fP  
2 H aH bH cH dM eH fP gH hH  
+3 P aP bP cM dH eP fP gP hH iP  
4 H aH bH

Comments:

There are several limitations to performing this task, including the inability to prepare routes, evacuate casualties, and conceal movements.

COMPANY TEAM ARTEP 71-1-MTP

PERFORM RELIEF IN PLACE (17-2-0324)

Task Rating: N

Subtask/Standard Ratings:

1 M aH bH cP dH eH fH gH hN iN  
2 N aP bN cN dM  
+3 H aH bH cH dP eP fP gP hH iH jH  
+4 H aH bH  
+5 H aH bM cH dH  
6 N aN bN cH dN eM fH gH hN  
+7 N aH bN cH dN eN

Comments:

Company teams cannot prepare for the relief, occupy an assembly area, or transfer supplies. Also, there are no dismounted positions to relieve.

COMPANY TEAM ARTEP 71-1-MTP

EMPLOY INDIRECT FIRE IN THE OFFENSE (17-2-0401)

Task Rating: H

Subtask/Standard Ratings:

+1 H aH bM cH dH eH fM  
+2 H aH bH cH dH eH fH gH  
+3 H aH bH cH dH eH fH gH hH iH jH kM lM mH

Comments:

The few limitations here include lack of COLT and naval gunfire.

COMPANY TEAM ARTEP 71-1-MTP

EMPLOY INDIRECT FIRE IN THE DEFENSE (17-2-0402)

Task Rating: H

Subtask/Standard Ratings:

+1 H aH bM cH dH eH fM gH hH  
2 H aH bH cH dH eH fH gH  
+3 H aP bH cH dH eH fH gH hH iM jM kH

Comments:

No COLT or naval gunfire.

COMPANY TEAM ARTEP 71-1-MTP

BREACH AN OBSTACLE (17-2-0501)

Task Rating: N

Subtask/Standard Ratings:

+1	N	aN	bN	cN	dN	eN	fN
2	O	aO	bO	cO	dO	eO	fN
3	P	aH	bP				
+4	N	aN	bP	cN			
5	N	aN	bN	cN	dN	eN	
6	N	aM	bM	cN	dN		
+7	N	aN	bN	cN	dN	eN	fN gN
+8	N	aN	bN	cN	dN	eN	
9	N	aN	bN	cN			
10	N	aN	bN				
11	N	aN	bN				
12	N	aN	bN	cN	dH		

Comments:

Man-made obstacles and minefields are not represented on the SIMNET battleground. This task is not appropriate for performing in the simulation.

COMPANY TEAM ARTEP 71-1-MTP

EMPLACE AN OBSTACLE (17-2-0502)

Task Rating: N

Subtask/Standard Ratings:

1	O	aO	bO	cO									
+2	N	aN	bN	cN	dN	eN	fN	gN	hN	iN	jN	kN	lN mN

Comments:

This task is not appropriate for performing in the simulation.

COMPANY TEAM ARTEP 71-1-MTP

PREPARE FOR A CHEMICAL ATTACK (03-2-C013)

Task Rating: N

Subtask/Standard Ratings:

+1 N aO bN  
2 M aO bH  
3 N aO bN

Comments:

Chemical warfare is not represented in the simulation.

COMPANY TEAM ARTEP 71-1-MTP

PREPARE FOR A NUCLEAR ATTACK (03-2-C015)

Task Rating: N

Subtask/Standard Ratings:

1 O aH bO cO dO  
+2 N aH bO cN dN eN  
+3 N  
4 M aN bH

Comments:

Nuclear warfare is not represented in the simulation.



COMPANY TEAM ARTEP 71-1-MTP

RESPOND TO THE INITIAL EFFECTS OF A NUCLEAR ATTACK (03-2-C028)

Task Rating: N

Subtask/Standard Ratings:

1 N aN bN cN  
+2 N aH bO cO dN eO fN gH  
+3 N aN bN cN dN

Comments:

Nuclear attacks are not represented in the simulation.

COMPANY TEAM ARTEP 71-1-MTP

RESPOND TO THE RESIDUAL EFFECTS OF A NUCLEAR ATTACK (03-2-C030)

Task Rating: N

Subtask/Standard Ratings:

+1 N aN bN cN dN eN fN  
+2 N aN bH cO  
3 N aH bH cN dN eN

Comments:

Nuclear attacks are not represented in the simulation.

COMPANY TEAM ARTEP 71-1-MTP

PERFORM HASTY DECONTAMINATION (03-2-C031)

Task Rating: N

Subtask/Standard Ratings:

1 P aO bP cH dH  
2 N aN bN cH  
3 N aN bN  
4 N aP bH cN dN  
+5 N aN bN cN  
+6 N aH bH cN dN  
7 N aH bN cN dN  
8 H

Comments:

This task is not appropriate for performing in the simulation.

COMPANY TEAM ARTEP 71-1-MTP

COORDINATE FOR DETAILED EQUIPMENT DECONTAMINATION (03-2-C033)

Task Rating: N

Subtask/Standard Ratings:

+1 O aO bO cP dO  
2 N aO bN cN dN eN  
+3 N aN bH cH dO eN fP gN  
+4 N aN bN cN  
5 N aN bN  
6 N aM bO cN dH

Comments:

This task is not appropriate for performing in the simulation.

COMPANY TEAM ARTEP 71-1-MTP

DEFEND AGAINST AIR ATTACK (ACTIVE) (44-2-C002)

Task Rating: M

Subtask/Standard Ratings:

+1 M aH bM cM dH eM fH gN hN iH jH  
2 M aH bH cH dP eH fM gH hH iN jN  
+3 M aH bM cN dM eM fH gH  
+4 N aH bN cP dP eN fM gN hM iH

Comments:

There are numerous limitations here, including the lack of small arms and dismount capability.

COMPANY TEAM ARTEP 71-1-MTP

DEFEND AGAINST AIR ATTACK (PASSIVE) (44-2-C001)

Task Rating: M

Subtask/Standard Ratings:

+1 P aM bP cH dH eH fP gM hH  
2 N aN bN cN dP eP fH gM  
3 M aH bN cH dM  
4 H aH bH cH dH eM

Comments:

There are limitations in the cover, concealment, camouflage, and protection available, as well as in the capability to man OPs.

COMPANY TEAM ARTEP 71-1-MTP

MAINTAIN OPERATION SECURITY (17-2-0201)

Task Rating: N

Subtask/Standard Rating:

+1 M aH bM cM dH eM fN  
+2 N aM bP cN dN  
+3 M aP bP cP dM eM fM  
+4 N aP bP cM dN eM fN gP hM iN jN kN lN mM  
+5 P aP bP cH dP eH fP  
+6 P aN bH cP dP  
+7 N aN bN cN

Comments:

There are several limitations here, with major ones including the lack of camouflage, the inability to employ many local security measures, and the lack of a need for noise and light discipline.

COMPANY TEAM ARTEP 71-1-MTP

PERFORM LOGISTICAL PLANNING (17-2-0701)

Task Rating: P

Subtask/Standard Ratings:

1 H aH bP cH dH eH fP gP hH iP  
2 P aH bP cP dH eM fO

Comments:

The primary limitation here is lack of special requirements or operational-specific items.

COMPANY TEAM ARTEP 71-1-MTP

PERFORM TAILGATE RESUPPLY (17-2-0702)

Task Rating: N

Subtask/Standard Ratings:

1 M aP bN  
2 P aP bP cH  
+3 N aN bP cH dH eN  
4 N aN bM cP dP eN  
+5 N aN bN cN dN eN fP gN hN iN jH kN lN  
6 H

Comments:

Resupply vehicles cannot move to each battle position.

COMPANY TEAM ARTEP 71-1-MTP

PERFORM SERVICE-STATION RESUPPLY (17-2-0703)

Task Rating: M

Subtask/Standard Ratings:

+1 M aM bM cN  
2 H aH bP cH  
3 P aP bP cM  
4 M aM bM  
5 M aN bH  
6 N aH bN cN  
7 P aP bH  
+8 M aH bH cP dM eM fN gH hH iN jM  
+9 H aH bH  
10 H

Comments:

There are numerous limitations here. Service-station resupply can be accomplished in SIMNET, but many of the operations are artificial.

COMPANY TEAM ARTEP 71-1-MTP

CONSOLIDATE ON THE OBJECTIVE (17-2-0704)

Task Rating: P

Subtask/Standard Ratings:

1 P aH bM  
2 H aH bH cH dH  
3 P aP bP cN dM eH fP  
4 N aP bH cN dH eN  
5 P aP bP cH

Comments:

There are no dismounted infantry elements and the company team cannot emplace obstacles or alarms.

COMPANY TEAM ARTEP 71-1-MTP

REORGANIZE ON THE OBJECTIVE (17-2-0706)

Task Rating: M

Subtask/Standard Ratings:

1 P aP bP cH dH eP  
2 H aH bH cH  
3 N aH bN cN dP  
4 P aM bP cP  
5 P aP bH cH dP eH fO  
6 N aO bM cN  
7 M aM bM cN dP eP fP  
8 P aH bM cM dP eH

Comments:

There are no dismounted infantry elements (subtask 3) and the company team cannot evacuate personnel (subtask 6).

COMPANY TEAM ARTEP 71-1-MTP

INTEGRATE REPLACEMENTS (12-2-C007)

Task Rating: 0

Subtask/Standard Ratings:

1 O aO bN cO dM  
2 O aN bO cO  
3 O

Comments:

All subtasks must be performed outside the simulation.

COMPANY TEAM ARTEP 71-1-MTP

PROVIDE MEDICAL EVAC AND TREATMENT OF CASUALTIES (17-2-0705)

Task Rating: 0

Subtask/Standard Ratings:

+1 O aO bH cO  
2 O aO bO cM dO eO  
3 O aO bO cN  
+4 O aO bO cO  
+5 O aO bO cO dO  
+6 O aO bO  
7 N aH bN cO dO eN  
8 O aO bO cO dN eO

Comments:

All subtasks can be performed in the facility outside the simulation except for the preparation of a landing site (subtask 7).

COMPANY TEAM ARTEP 71-1-MTP

PROVIDE MAINTENANCE SUPPORT (43-2-C003)

Task Rating: N

Subtask/Standard Ratings:

+1 M aM bP CM dH  
2 M aM bM CM dN  
+3 N aN bN CN dO  
4 M aN bM CH  
+5 N aM bM CN dN eM  
+6 M aM bM CN dN eM  
7 N aN bN CH  
8 H aH bH CH

Comments:

There are numerous limitations here; maintenance is artificially handled in SIMNET.

COMPANY TEAM ARTEP 71-1-MTP

PROCESS ENEMY PRISONERS OF WAR (EPWs) (19-2-C004)

Task Rating: N

Subtask/Standard Ratings:

+1 N aN bN CN  
+2 N aN bN  
+3 N aN bN CN dN eN

Comments:

This task is not appropriate for performing in the simulation.



COMPANY TEAM ARTEP 71-1-MTP

PREPARE FOR COMBAT (17-2-0101)

Task Rating: P

Subtask/Standard Ratings:

1 H	aH bH
+2 H	aP bH cH
+3 H	aH bH cH dP eH fH
4 M	
5 H	aH bH cH
6 H	aH bH cH
7 P	aP bM cP
8 P	aP bP cH
+9 P	aH bH cP dP eP fH gH hM iP jM
+10 H	aH bH cH
+11 P	aH bH cP dM eP fP gM
+12 M	aP bP cM dO

Comments:

This task barely fails to meet the criteria for an "H" rating.

**APPENDIX C**

**Battalion Task Force SIMNET Assessment**

BATTALION TASK FORCE ARTEP 71-2-MTP

OCCUPY ASSEMBLY AREA (7-1-3001)

Task Rating: N

Subtask/Standard Ratings:

1 P	aP bH cH dP
2 M	aH bM cH dM eM fN
+3 N	aH bM cN dN
+4 N	aH bN cN dN
+5 M	aM bM cN dM eM
6 M	aM bH cN dH eH fM

Comments:

There are numerous limitations to performing this task in SIMNET, with the primary ones relating to quartering party operations (establishing security and preparing site) and moving into positions (light discipline, track marks, and cover and concealment).

BATTALION TASK FORCE ARTEP 71-2-MTP

PERFORM TACTICAL ROAD MARCH (7-1-3002)

Task Rating: M

Subtask/Standard Ratings:

1 P	aH bH cH dH eH fM gH hN iM jP kM lP mM nM oP pP qM rP
+2 M	aM bM cM dN
3 M	aP bH cH dP eH fN gM hN iH jH
+4 H	aH bH cH
+5 M	aM bM
+6 P	aP bP cM
7 H	aH bH
+8 M	aM bM cP dM

Comments:

This task barely fails to meet the criteria for a "P" rating. Primary limitations relate to preparing for the road march, some aspects of reconnaissance (obstacles and NBC monitoring), vehicle recovery, and actions at halts.

BATTALION TASK FORCE ARTEP 71-2-MTP

PERFORM PASSAGE OF LINES (7-1-3003)

Task Rating: M

Subtask/Standard Ratings:

1 M aP bO cH dH eH fM gH hO  
+2 M aH bH cH dN eH fH gH hH iP jH kN lP mM nH oM pP qH  
+3 M aH bM cP dM  
+4 P aP bH cP dM  
+5 M aH bH cN dN eH fP gH hP iH

Comments:

There are numerous limitations to performing this task in SIMNET, including the lack of signals and markings, the absence of NBC contamination, and the lack of obstacles.

BATTALION TASK FORCE ARTEP 71-2-MTP

MOVE TACTICALLY (7-1-3004)

Task Rating: M

Subtask/Standard Ratings:

1 M aP bP cH dM eM fH gH hH iM jN kN lN  
+2 H  
+3 P aP bH cH dP  
4 H aH bH  
+5 N aM bN  
+6 M aH bM cM  
+7 M aM bM cH  
+8 P  
+9 H  
10 H aH bP cH

Comments:

The most serious limitation here is the inability to minimize exposure through use of smoke, security, and ADA coverage (subtask 5). Other concerns include the lack of antitank elements and the scarcity of restricted areas on the SIMNET battleground.

BATTALION TASK FORCE ARTEP 71-2-MTP

PERFORM HASTY RIVER/GAP CROSSING (7-1-3005)

Task Rating: M

Subtask/Standard Ratings:

1 M aM bM cM dM eO fP gH hH  
+2 N aP bH cM dN eN fP gN hH iN  
+3 P aH bP cN dH  
+4 M aH bM cH dN  
+5 H aH bH cH dH eH  
+6 H aH bH cH dH

Comments:

Some reconnaissance actions cannot be performed (subtask 2) and there is no AVLB support. The overall task condition calls for AVLB support, but the subtasks indicate that the crossing can be accomplished over existing bridging. Bridges in SIMNET are simply roads across streams. This task receives a "low minimal" rating.

BATTALION TASK FORCE ARTEP 71-2-MTP

FIGHT A MEETING ENGAGEMENT (7-1-3006)

Task Rating: H

Subtask/Standard Ratings:

+1 P aH bN cH dH eH fP  
+2 P aH bH cH dH eH fN  
3 H aH bH cP dH eH fH  
4 H aH bH cH dP eH fH  
+5 H aH bH

Comments:

The enemy has no obstacles (1b) and cannot improve forward defenses (2f). All other aspects of this task can be performed in SIMNET.

BATTALION TASK FORCE ARTEP 71-2-MTP

ASSAULT (7-1-3007)

Task Rating: H

Subtask/Standard Ratings:

+1 P aP bH  
+2 H aP bH cH  
3 H aH bP cM dH eM fH gH hH iH jP kH  
4 P aP bH cH dP eP  
5 H aH bH  
+6 H aH bH cH dH

Comments:

The only concerns here relate to the absence of enemy obstacles (3c) and antitank weapons (3e).

BATTALION TASK FORCE ARTEP 71-2-MTP

ATTACK/COUNTERATTACK BY FIRE (7-1-3008)

Task Rating: P

Subtask/Standard Ratings:

1 H aP bH cH dP eP fM gH hM iH  
+2 P aM bH cP  
+3 P aH bP cM  
+4 H aH bH cP

Comments:

The primary limitations here involve preparation for movement and occupation of BPs (2a) and all-round security (3c).

BATTALION TASK FORCE ARTEP 71-2-MTP

DEFEND (7-1-3009)

Task Rating: M

Subtask/Standard Ratings:

1 M aP bH cH dP eP fH gH hP iO jM kN lH mP nH oP pN qH rO sH  
tM  
+2 N aM bN cM dH eN fP  
+3 P aP bH cN dH eP  
+4 H aH bH cP

Comments:

The battalion task force cannot prepare fighting positions or emplace obstacles. Due to these and other limitations, defense in SIMNET must be hasty.

BATTALION TASK FORCE ARTEP 71-2-MTP

COVER PASSAGE OF LINES (7-1-3010)

Task Rating: M

Subtask/Standard Ratings:

1 P aP bO cH dH eH fM gH  
+2 M aH bH cH dN eH fH gP hP iP jH kN lP mM nH oM pP  
+3 M aN bM cP dP eM fP  
+4 M aH bM cM dN eH  
+5 P aP bH cP dH eH fO gP hH  
+6 P aP bH cM dH eN fH

Comments:

Primary limitations here include the lack of obstacles/mines and NBC contamination.

BATTALION TASK FORCE ARTEP 71-2-MTP

WITHDRAW NOT UNDER ENEMY PRESSURE (7-1-3011)

Task Rating: P

Subtask/Standard Ratings:

1 H aH bH cH dM eP fH gH hM  
+2 M aM bP  
+3 P aP bH cP  
+4 H aH bH cP

Comments:

The battalion task force cannot prepare routes (1d) and there are no nonessential elements to withdraw (1h, 2a).

BATTALION TASK FORCE ARTEP 71-2-MTP

WITHDRAW UNDER ENEMY PRESSURE (7-1-3012)

Task Rating: P

Subtask/Standard Ratings:

1 M aH bH cP dN eN fP gP hH iH  
+2 P aH bP cP dH eH fH gP hP iP jP kP lH  
+3 H aH bH  
+4 P

Comments:

The battalion task force cannot use obstacles and FASCAM in SIMNET (1d and e).

The overall task condition calls for the battalion task force to be attacked by an MRR(+). The above analysis assumes that an enemy force of this size can be represented in SIMNET.



BATTALION TASK FORCE ARTEP 71-2-MTP

DELAY (7-1-3013)

Task Rating: M

Subtask/Standard Ratings:

+1 P aH bP cH dP eH fH gH hH iP jM kO lH mH nP  
+2 N aM bM cN dN  
+3 H aH bH cH dH eH fH gH

Comments:

The battalion task force cannot prepare for the delay (subtask 2) by marking routes, preparing subsequent positions, or emplacing obstacles.

BATTALION TASK FORCE ARTEP 71-2-MTP

PERFORM RELIEF IN PLACE (7-1-3014)

Task Rating; M

Subtask/Standard Ratings:

1 P aH bH cM dH eH fH gN hP iH jH kM lP mH  
2 M aH bM cM dM eN  
+3 P aM bP cH  
+4 M

Comments:

The battalion task force cannot mark routes or transfer or remove obstacles (1g and 2e). There are also limitations in quartering party operations and guides (2c and d).

BATTALION TASK FORCE ARTEP 71-2-MTP

PERFORM LINKUP (7-1-3015)

Task Rating: P

Subtask/Standard Ratings:

1 P aH bP cP dH  
+2 P  
+3 P aP bH  
+4 P aH bP cM dP

Comments:

There are limitations in concealing and securing the linkup site. There may also be problems in representing two battalion task forces in SIMNET at one time.

BATTALION TASK FORCE ARTEP 71-2-MTP

PERFORM RESERVE OPERATIONS (7-1-3016)

Task Rating: M

Subtask/Standard Ratings:

1 O aO bH cM dP eO fO  
+2 M aM bP cM dP  
+3 M aP bM  
+4 H aH bH  
+5 P  
+6 P aP bP cH

Comments:

The brigade and forward battalions must be represented outside the simulation (subtask 1). The battalion task force is limited in the preparation it can accomplish (subtask 2) and in its ability to go into a defensive posture (subtask 3).

BATTALION TASK FORCE ARTEP 71-2-MTP

PERFORM REAR OPERATIONS (7-1-3017)

Task Rating: M

Subtask/Standard Ratings:

1 M aM bN cH dP  
2 P aH bP cP dN  
+3 M aM bM cM dM  
+4 H aH bH  
+5 P aP bH  
+6 N aN bN cN  
+7 P aP bH  
+8 P aH bM

Comments:

The primary limitation here is the absence of a brigade MSR in SIMNET.

BATTALION TASK FORCE ARTEP 71-2-MTP

PERFORM RAID (7-1-3018)

Task Rating: M

Subtask/Standard Ratings:

1 P aP bH  
+2 P aP bP  
+3 P aP bP cM  
+4 H aH bH  
+5 N  
+6 M aN bH cM dP

Comments:

The primary problem here is that the specific tasks normally directed by brigade (prisoners captured, installation destroyed) cannot be accomplished in SIMNET.

BATTALION TASK FORCE ARTEP 71-2-MTP

INFILTRATE (7-1-3019)

Task Rating: M

Subtask/Standard Ratings:

+1 P aP bP cP dP eP fH  
+2 P aP bH cO dM eH fP gH hP iP jP  
+3 N aN bN cP  
+4 P  
+5 P aH bP cP

Comments:

The battalion task force cannot prepare for infiltration (subtask 3). Also, the infiltration can only be performed mounted during day in SIMNET (overall task condition calls for day or night, mounted or dismounted).

BATTALION TASK FORCE ARTEP 71-2-MTP

PERFORM GUARD (7-1-3020)

Task Rating: P

Subtask/Standard Ratings:

1 H aH bH cH dP eH fP  
+2 P aH bP cN dH eH fP

Comments:

The battalion task force cannot identify and breach obstacles (2c).

BATTALION TASK FORCE ARTEP 71-2-MTP

BYPASS ENEMY FORCE (7-1-3021)

Task Rating: H

Subtask/Standard Ratings:

1 H aH bH cH dH eP fP  
+2 H  
+3 H aH bH cH dP eH

Comments:

None.

BATTALION TASK FORCE ARTEP 71-2-MTP

REORGANIZE (7-1-3022)

Task Rating: M

Subtask/Standard Ratings:

1 P aH bP cM  
+2 M aP bN cM dP eP fO gM hP iH

Comments:

The battalion task force cannot evacuate captured personnel, documents, and equipment (2b). Casualty treatment and evacuation must be accomplished outside the simulation (2f).

BATTALION TASK FORCE ARTEP 71-2-MTP

CONSOLIDATE (7-1-3023)

Task Rating: P

Subtask/Standard Ratings:

+1 P aP bH cP dP eP fH

Comments:

There are limitations in security and reconnaissance.

BATTALION TASK FORCE ARTEP 71-2-MTP

PERFORM AIR ASSAULT (7-1-3024)

Task Rating: N

Subtask/Standard Ratings:

1 O aO bO cP  
2 H  
3 O aO bO cO dO eO fO  
4 O aO bO cO dO eO fH gO hO iO  
5 O aO bO cO dO eO fO gO hO  
6 O aO bO cO  
7 O aO bO cN dO eO  
+8 P aM bH  
+9 N aN bN cN dN eN  
+10 N aP bP cM dN eN fM

Comments:

SIMNET does not include sufficient aviation assets to support performance of this task.

BATTALION TASK FORCE ARTEP 71-2-MTP

BREAKOUT FROM ENCIRCLEMENT (7-1-3025)

Task Rating: M

Subtask/Standard Ratings:

+1 H aH bH  
+2 P aP bP cH  
+3 P aH bP cP dP  
4 M aP bH cP dH eM fP gH hM iO jN kH  
+5 P aP bP  
+6 N aH bN cH dH eH fO gP hN  
+7 P aP bH cP

Comments:

There are several limitations here, especially in subtask 6. There are no wheeled vehicles traveling over the SIMNET terrain (6b), personnel cannot be evacuated in the simulation (6f), and equipment and supplies cannot be destroyed (6h).

This analysis is based on the assumption that sufficient enemy forces can be represented in SIMNET to encircle a battalion task force.

BATTALION TASK FORCE ARTEP 71-2-MTP

PERFORM SCREEN (7-1-3026)

Task Rating: H

Subtask/Standard Ratings:

+1 P aH bP cP dH eP  
+2 P aH bH cH dN  
+3 H aH bH cH  
+4 H  
+5 H  
6 H aH bH cH

Comments:

SIMNET does not represent limited visibility (2d).

BATTALION TASK FORCE ARTEP 71-2-MTP

BREACH DEFENDED OBSTACLES (7-1-3027)

Task Rating: N

Subtask/Standard Ratings:

+1 N aN bN cN dN eN fN gN  
+2 O aO bO cO dO eO fO gO hO  
+3 N aN bN cP  
+4 P aP bP cN dH eM  
+5 N aN bN cN  
+6 N aN bN cN  
+7 N aN bN cN dN eN fN gN  
+8 N aN bN  
+9 N aN bN cN  
+10 N aN bN cN dN  
+11 N aN bN cN dN eN

Comments:

Man-made obstacles and minefields are not represented on the SIMNET battleground. This task is not appropriate for performing in the simulation.

BATTALION TASK FORCE ARTEP 71-20MTP

MAINTAIN OPERATIONS SECURITY (7-1-3028)

Task Rating: M

Subtask/Standard Ratings:

1 P aH bP  
2 M aP bP cH dH eH fP gP hN iN jH kN lP mH nP oP pP  
+3 M aP bN  
+4 P aH bH cM dH eP fH gH hH iN jM kH lH mH  
+5 N aM bN  
+6 P

Comments:

There are numerous limitations here, including the absence of camouflage, limited visibility, and civilians. This task barely meets the criteria for an "M" rating.

BATTALION TASK FORCE ARTEP 71-2-MTP

COMMAND AND CONTROL THE BATTALION TASK FORCE (7-1-3901)

Task Rating: H

Subtask/Standard Ratings:

+1 H aH bH  
2 H aH bP cH  
+3 P aP bP cP dH eH  
4 H aH bH  
5 H  
6 H  
7 H aH bH cH dP eP fH gH  
8 H aH bH  
+9 H aH bP cH  
+10 H aH bH cH  
+11 P aP bH cH dP  
+12 H aH bP cP dH eH  
+13 H  
+14 P  
+15 P

Comments;

There are no major limitations to performing this task in SIMNET. This may be the sort of task that SIMNET is best used to train.



BATTALION TASK FORCE ARTEP 71-2-MTP

PERFORM S3 OPERATIONS (7-1-3902)

Task Rating: M

Subtask/Standard Ratings:

+1 H aH bP cH dH  
+2 H aH bH cH  
3 P aP bH  
4 H  
5 N aO bH cH dH eP fO gO hN iN  
6 O aO bO cO dM eO fO gM hM  
7 N aO bN cN dN eN  
8 H aH bH cH dP eP  
9 M aH bM cM dM  
10 H aH bH  
11 H aH bH cH dP eH fH gP hH  
+12 H aH bH

Comments:

The most serious limitations here relate to the lack of engineer, ADA, and NBC assets (subtasks 5, 6, and 7).

BATTALION TASK FORCE ARTEP 71-2-MTP

COMMAND GROUP OPERATIONS (7-1-3903)

Task Rating: H

Subtask/Standard Ratings:

1 H aH bP cH dH eH  
2 P aH bP  
3 H  
+4 P aH bP cM  
+5 H aH bH cH dH  
+6 H aH bH cH  
+7 P  
+8 H aH bH

Comments:

Combat support elements are limited in SIMNET (4c).

BATTALION TASK FORCE ARTEP 71-2-MTP

OPERATE MAIN COMMAND POST (7-1-3904)

Task Rating: H

Subtask/Standard Ratings:

+1 M aM bM  
+2 H  
3 H aH bH cH  
4 H aH bH  
5 H aH bP cH  
6 H  
7 H aP bH cH  
8 H aH bH cP  
+9 H aH bH  
+10 H  
11 H aH bH cH dP eH fP gH hP iH jH  
12 P aH bH cP dP  
13 P aP bH cP dM  
14 H aH bH cP dP eH fM gH hH iH  
+15 H aH bH

Comments:

The main command post cannot actually be moved over the SIMNET terrain, but it can be "beamed" from one location to another (subtask 1).

BATTALION TASK FORCE ARTEP 71-2-MTP

MAINTAIN COMMUNICATIONS (7-1-3401)

Task Rating: P

Subtask/Standard Ratings:

+1 P  
+2 M  
+3 P aH bH cH dH eH fH gH hH iN jH kP

Comments:

Alternate communications means (subtask 2) are limited in SIMNET. Wire can be provided by using units, and messengers can be used if their travel times are controlled (they will not actually travel over the terrain). Power settings are not adjustable and directional antennas are not used in SIMNET (3i).

BATTALION TASK FORCE ARTEP 71-2-MTP

MOVE A COMMAND POST (7-1-3035)

Task Rating: N

Subtask/Standard Ratings:

1 N  
+2 N aN bN cN  
+3 N  
+4 N aN bN  
+5 N

Comments:

The command post cannot be moved in vehicles over the SIMNET battleground.

BATTALION TASK FORCE ARTEP 71-2-MTP

ESTABLISH A COMMAND POST (7-1-3036)

Task Rating: N

Subtask/Standard Ratings:

+1 H  
+2 N aM bM cN dN eN  
+3 N aP bN cN dN eN fN gM hN  
+4 H aP bH cH dH eM  
5 N aN bN

Comments:

The battalion task force command post cannot establish security (subtask 2), establish a perimeter defense (subtask 3), or move over the terrain (subtask 5) in SIMNET.

BATTALION TASK FORCE ARTEP 71-2-MTP

PERFORM INTELLIGENCE OPERATIONS (7-1-3905)

Task Rating: P

Subtask/Standard Ratings:

1 P aH bH cP dP eP  
+2 P aM bP cH dP  
+3 H aH bH cP dH  
+4 M aM bP cN dH

Comments:

There are no obstacles (2a) or dismounted OPs or patrols (2a, 4a, and 4c) in SIMNET.

BATTALION TASK FORCE ARTEP 71-2-MTP

PERFORM S2 OPERATIONS (7-1-3906)

Task Rating: P

Subtask/Standard Ratings:

+1 P aH bH cM dN eP fH gH hH  
+2 H  
+3 H  
+4 M aP bP cP dN eH fN gP hH iP jH kM lH mH  
+5 M aN bH cM dP  
+6 H  
+7 P  
8 P aM bH cH dP eM fH  
+9 N aH bN cN  
+10 P

Comments:

SIMNET does not include weather effects (1d), dismounted OPs and patrols (4d), GSRs and REMS (4f), or outside intelligence assets (5a). Also, there are serious OPSEC limitations (subtask 9) in SIMNET.

BATTALION TASK FORCE ARTEP 71-2-MTP

EMPLOY FIRE SUPPORT (7-1-3907)

Task Rating: H

Subtask/Standard Ratings:

1 H aH bH cH  
2 P  
3 H aH bH  
+4 H aH bH cH dH eH fH gH  
5 P aH bH cM dH eN  
6 H aH bH

Comments:

There are few limitations to performing this task in SIMNET. One is that there are no enemy air defense weapons to suppress (5e).

BATTALION TASK FORCE ARTEP 71-2-MTP

OPERATE FIRE SUPPORT SECTION OPERATIONS (7-1-3908)

Task Rating: H

Subtask/Standard Ratings:

+1 H aH bP cH dH  
2 H  
3 H  
+4 H aH bH cH dM  
+5 H aH bP cH dP eH fH gH hH iP  
+6 P aP bP  
+7 H aM bH cH dH eP fH gH hP iP

Comments:

There are few limitations to performing this task in SIMNET. One is that not all fire support assets (e.g., illumination, FASCAM) are available (4d).

BATTALION TASK FORCE ARTEP 71-2-MTP

PERFORM MOBILITY/SURVIVABILITY OPERATIONS (7-1-3909)

Task Rating: N

Subtask/Standard Ratings:

1 P aP bH  
+2 M aN bP  
3 O aO bO  
4 O aO bO cO  
+5 N aN bN cN  
+6 N  
+7 N aN bN cN dN  
+8 N aN bN cN dN eN fN gN hN iN  
9 N aN bN  
+10 N aP bN cH dN eP fP  
+11 N

Comments:

There are no engineer assets, minefields, or man-made obstacles included in SIMNET.

BATTALION TASK FORCE ARTEP 71-2-MTP

PERFORM NBC OPERATIONS (7-1-3910)

Task Rating: N

Subtask/Standard Ratings:

1 O  
+2 N aN bN  
+3 N aO bN cN dN  
+4 N aN bO cN dN eN  
+5 N aN bO cN dN eN fO gO hN iN  
+6 N aN bN cN  
+7 M aM bM  
+8 N aN bN  
+9 N aN bN

Comments:

Nuclear weapons and chemical agents are not represented in SIMNET.

BATTALION TASK FORCE ARTEP 71-2-MTP

REACT TO A CHEMICAL ATTACK (7-1-3029)

Task Rating: N

Subtask/Standard Ratings:

+1 N aO bN cN dN eN fN

+2 N aO bO cN dO eN fN gN hO iN jN kN lO

Comments:

Chemical weapons are not represented in the simulation.

BATTALION TASK FORCE ARTEP 71-2-MTP

PREPARE FOR FRIENDLY NUCLEAR STRIKE (7-1-3030)

Task Rating: N

Subtask/Standard Ratings:

+1 O aO bO cO dO eO

2 N aN bN cN dN eN fN gN hN iN jN kN lN

3 N

Comments:

Nuclear warfare is not represented in the simulation.

BATTALION TASK FORCE ARTEP 71-2-MTP

CROSS A CHEMICALLY/NUCLEAR CONTAMINATED AREA (7-1-3031)

Task Rating: N

Subtask/Standard Ratings:

1 N aO bO cN dN eO fN gN hN

+2 N aN bN cN dN

+3 N aN bN cO dN eN

Comments:

Contaminated areas are not represented in the simulation.

BATTALION TASK FORCE ARTEP 71-2-MTP

PERFORM HASTY DECONTAMINATION (7-1-3032)

Task Rating: N

Subtask/Standard Ratings:

1 O aO bO cO  
+2 N  
+3 N aN bO cN dN eN fN  
+4 N  
+5 N  
+6 N  
+7 N

Comments:

This task is not appropriate for performing in the simulation.

BATTALION TASK FORCE ARTEP 71-2-MTP

REACT TO INDIRECT FIRE (7-1-3034)

Task Rating: N

Subtask/Standard Ratings:

+1 N aN bN cN dN eN fN  
+2 N aN bN cN dM eN

Comments:

The battalion task force command post cannot react (move or take cover) to indirect fire.



BATTALION TASK FORCE ARTEP 71-2-MTP

PERFORM AIR DEFENSE OPERATIONS (7-1-3911)

Task Rating: N

Subtask/Standard Ratings:

+1 M aH bM cO  
2 H  
3 M aN bH cP  
+4 N  
+5 N  
+6 M aH bH cM dM eP fM  
+7 N  
8 N aN bN cN dN eN

Comments:

Air defense weapons are not available in SIMNET.

BATTALION TASK FORCE ARTEP 71-2-MTP

DEFEND AGAINST AIR ATTACK (7-1-3037)

Task Rating: N

Subtask/Standard Ratings:

1 N aN bN cN dM eN fM gM hN  
2 N aN bN cN dN eN fM gM hN iN jM  
+3 N aN bN cN dN eN fM gN  
+4 N aN bN cN dN eN fN gN hN

Comments:

The battalion task force command post cannot take active air defense measures in SIMNET.

BATTALION TASK FORCE ARTEP 71-2-MTP

PERFORM COMBAT SERVICE SUPPORT OPERATIONS (7-1-3912)

Task Rating: N

Subtask/Standard Ratings:

1	P	aP	bP	cP															
+2	H																		
+3	N	aM	bN	cN	dN	eN													
4	M	aM	bM	cN															
5	M	aH	bM	cM	dM	eM	fM	gM	hM	iM	jN	kN							
+6	M	aM	bM	cN	dM	eM													
+7	N	aN	bN	cO	dN	eO	fN	gN	hN	iN									
+8	O	aO	bO	cO	dO	eO	fO												
9	O	aO	bO	cO	dN	eO	fO	gO	hO										
+10	M	aN	bM	cM															
+11	N	aN	bN	cN															
+12	N	aN	bN	cN	dN	eN	fN	gN											
+13	N	aN	bN	cN	dN	eN	fN	gO	hN	iN									
14	N	aN	bO	cP	dP	eO													
15	N	aN	bO	cN	dN	eN	fN	gN											
16	N	aO	bN	cN	dN														

Comments:

Little of this task can be performed in SIMNET except for planning and coordination.

BATTALION TASK FORCE ARTEP 71-2-MTP

OPERATE COMBAT TRAINS CP (7-1-3913)

Task Rating: N

Subtask/Standard Ratings:

1	H	aH	bH	cH															
+2	M	aP	bM	cH	dH	eH	fN	gM	hM	iM									
+3	P	aH	bH	cH	dN														
4	M	aM	bM	cH	dM	eH													
+5	H	aH	bH	cP	dH	eH	fH	gM											
+6	N	aH	bH	cO	dN	eH													
7	N	aM	bM	cM	dO	eM	fO	gN	hN										
+8	O	aO	bO	cO	dN														
+9	M																		
+10	M	aM	bM	cM															
+11	M	aP	bO																
+12	N	aN	bN	cN	dN	eM	fN												
+13	N	aM	bM	cN	dM	eM	fM	gM	hO	iO	jM	kP							
+14	M	aP	bN																
+15	N	aN	bN	cN	dM														

Comments:

Many parts of this task cannot be performed in the simulation; only planning and transmitting of information can be done at a high level.

BATTALION TASK FORCE ARTEP 71-2-MTP

OPERATE FIELD TRAINS COMMAND POST (7-1-3914)

Task Rating: N

Subtask/Standard Ratings:

1 H aH bH  
+2 N aN bN cN dN eN  
+3 N aN bN cN dN  
+4 N aN bN cN dN  
+5 N aN bN cN dN eN  
+6 N aN bN cN dN  
7 N  
+8 N aN bN cN  
+9 N aN bN cN  
+10 N aN bN

Comments:

Only planning can be performed in the simulation.

BATTALION TASK FORCE ARTEP 71-2-MTP

OPERATE PERSONNEL ADMINISTRATION CENTER (7-1-3915)

Task Rating: N

Subtask/Standard Ratings:

+1 P aP bM cP dP  
+2 O aP bP cO dO eO fO gO hO iN  
+3 N aN bN cO dO eO  
4 N aM bN cN dN eN fN gN  
+5 N aN bN cO dN eN fN gO hN iN jM  
+6 O aO bO cO dO  
7 M aM bM

Comments:

Personnel administration support is not directly supported by SIMNET, although some parts of it can be performed in the facility.

BATTALION TASK FORCE ARTEP 71-2-MTP

TREAT AND EVACUATE CASUALTIES (7-1-3033)

Task Rating: N

Subtask/Standard Ratings:

+1 O aO bO cO

+2 O

+3 N aO bN

+4 N aN bN

Comments:

The treatment and evacuation of CP casualties is not supported by the simulation.

**APPENDIX D**  
**SIMNET Enhancements Assessment**

PLATOON ARTEP 17-237-10-MTP

PREPARE FOR TACTICAL OPERATIONS (17-3-0101)

Task Rating: N

Subtask/Standard Ratings:

1 N aP bM cP dN eO fO  
+2 M aM bM cM dM

Enhancements Listing:

Category A: None

Category B:

Dismounted personnel: guard and security (1a, 2a, 2b, 2c)  
Crew-level maintenance (1b, 2c)  
Realistic prepare-to-fire checks (1b)  
Hot loop (2c, 2d)  
NBC alarms (2d)

Category C:

Realistic resupply of fuel and ammo (1c, 2c)  
Weapons cleaning (1d)  
Class I (1e)  
Sleeping arrangements in facility (1f)  
Equipment stowage (2c)

Comments:

It does not seem to be feasible to add enhancements to raise the rating of this task (no Category A enhancements).

PLATOON ARTEP 17-237-10-MTP

EMPLOY ELECTRONIC COUNTER-COUNTERMEASURES (17-3-0103)

Task Rating: M

Subtask/Standard Ratings:

+1 M aP bP cM dH eM fN gH hN iP

2 N

+3 M aH bN cH dM

4 P

5 H aH bH cP dH eH

Enhancements Listing:

Category A:

Realistic terrain effects on radio transmissions (1e, 3d)

Category B:

Alternate commo means (wire, dismounted courier) (1b, 1c, 1i)

Realistic frequencies (1a, 4, 5c)

Adjustable transmitter power settings (1f, 3b)

Category C:

Antennas (2, 3d)

Encryption devices (1h)

MIJI with varying audio characteristics (4)

Comments:

Addition of realistic terrain effects would raise task rating to P.



PLATOON ARTEP 17-237-10-MTP

PERFORM ASSEMBLY AREA ACTIVITIES (17-3-0200)

Task Rating: N

Subtask/Standard Ratings:

1 M aM bH  
+2 P aH bN cP dP eH fP  
+3 N aN bN cP  
4 N aH bM cN dN  
+5 M

Enhancements Listing:

Category A:

Dismounted personnel: guides (1a, 2b), quartering party (2f), OPs (3b), patrols (3c)

Category B:

Marked positions (2b)  
Machine guns (2c)  
Hot loop (4c)  
Early warning devices (3a)  
Small arms fires (4b)

Category C:

REDCON levels (5)  
Camouflage (4d)  
Cool-down procedures (2d)  
Range cards (4b)

Comments:

Addition of dismount capability would raise task rating to P.

PLATOON ARTEP 17-237-10-MTP

EXECUTE A HERRINGBONE FORMATION (17-3-0202)

Task Rating: H

Subtask/Standard Ratings:

1 H  
2 H (a or b)H CH  
+3 H aH bH cP dH eH fH gM  
4 M aM bM  
5 H aH bH cH dH

Enhancements Listing:

Category A: None

Category B:

Cover and concealment (3c)  
Dismounted security (3g)  
Crew-level maintenance (4a)

Category C:

Realistic resupply (4b)

Comments:

None.

PLATOON ARTEP 17-237-10-MTP

TAKE ACTIONS AT AN OBSTACLE (17-3-0401)

Task Rating: M

Subtask/Standard Ratings:

+1 M  
+2 P aH bM cP  
3 N  
4 H aH bH  
+5 P aP bP cH  
6 M aP bH cO dM

Enhancements Listing:

Category A:

Man-made obstacles appearing on terrain (1, 2c)

Category B:

On-board smoke (3)  
Cover and concealment (5a, 5b, 6a)  
Capability to execute air attack drill (2b)  
Capability to execute contact drill (2c)  
Personnel casualty assessment and evacuation (6c)

Category C:

Realistic vehicle recovery (6d)

Comments:

Addition of man-made obstacles on the terrain would raise task rating to P.

Raising task rating to H would require addition of man-made obstacles, on-board smoke, and cover and concealment.

COMPANY TEAM ARTEP 71-1-MTP

PERFORM RECONNAISSANCE (17-2-0202)

Task Rating: P

Subtask/Standard Ratings:

1	H	aH	bH	CH
+2	P	aP	bH	CH dO
3	H	aH	bH	CH dH
4	M	aP	bM	
+5	M	aP	bM	
6	P	aP	bP	CH
7	M	aN	bP	CH

Enhancements Listing:

Category A:

Dismounted personnel for recon and security (2a, 4a-b, 5a-b, 6a-b, 7b)

Category B:

Secure transmission means (7a)

Category C:

Capability to include attached intelligence assets (2d)

Comments:

Addition of dismount capability would raise task rating to H.

COMPANY TEAM ARTEP 71-1-MTP

PERFORM AN ATTACK BY FIRE (17-2-0311)

Task Rating: P

Subtask/Standard Ratings:

+1 P aP bP cP dP eH fM  
+2 H aH bH cH  
+3 H aH bH cH dP  
4 P aH bN cH  
+5 P aP bP cP dH  
6 H aH bH cH

Enhancements Listing:

Category A:

Machine guns (1a, 1', 4b, 5a-c)

Category B:

Cover and concealment (1b, 1c)

Dismounted recon (1d)

Capability to mark routes and positions (1f)

Fire support vehicle (3d)

Category C:

Range cards (1f)

Comments:

Addition of machine guns would raise task rating to H.

COMPANY TEAM ARTEP 71-1-MTP

DELAY (17-2-0321)

Task Rating: M

Subtask/Standard Ratings:

+1 M aH bP cH dH eP fN gH hH iO  
2 M aM bO cH  
3 N aN bM cN dN eN fM gN  
+4 H aP bH cH dH eM fH gP hH iH  
5 M aP bN

Enhancements Listing:

Category A: None

Category B:

Dismounted personnel (1f, 3b, 4e)  
More varied terrain (1b, 1e)  
Capability to mark routes and positions (1f, 3a)  
Obstacles (1i, 3e)  
Capability to prepare/improve positions (3c, 4a, 5a)  
Machine guns (4g)  
Capability to occupy assembly area (5b; see task 17-2-0325)

Category C:

Capability to prestock and evacuate fuel and ammo (2a, 2b, 3d, 3f, 3g)

Comments:

Several enhancements would be required to raise the rating of this task.

COMPANY TEAM ARTEP 71-1-MTP

PERFORM LOGISTICAL PLANNING (17-2-0701)

Task Rating: P

Subtask/Standard Ratings:

1 H aH bP cH dH eH fP gP hH iP  
2 P aH bP cP dH eM fO

Enhancements Listing:

Category A: None

Category B:

Machine guns (1b, 2b)  
Personnel casualty assessment (2c)

Category C:

Capability to prestock ammo and supplies (1f)  
Cross-leveling of supplies, equipment, and ammo (1g)  
Mission-specific supplies and equipment (e.g., NBC gear, explosives) (1i, 2e, 2f)

Comments:

It does not appear to be possible or appropriate to add enhancements to raise the rating of this task; not all mission-specific supplies and equipment can be carried in simulators.

COMPANY TEAM ARTEP 71-1-MTP

CONSOLIDATE ON THE OBJECTIVE (17-2-0704)

Task Rating: P

Subtask/Standard Ratings:

1	P	aH	bM				
2	H	aH	bH	cH	dH		
3	P	aP	bP	cN	dM	eH	fP
4	N	aP	bH	cN	dH	eN	
5	P	aP	bP	cH			

Enhancements Listing:

Category A: None

Category B:

- Dismounted personnel (1b, 3c, 3d, 3f, 4a, 5a)
- ITVs (1b)
- Cover and concealment (3a)
- Machine guns (3b)
- Hasty minefields/obstacles (4c)
- M8A1 alarms (4e)

Category C: None

Comments:

The addition of several enhancements would be required to raise the rating of this task.



BATTALION TASK FORCE ARTEP 71-2-MTP

ATTACK/COUNTERATTACK BY FIRE (7-1-3008)

Task Rating: P

Subtask/Standard Ratings:

1 H aP bH cH dP eP fM gH hM iH  
+2 P aM bH cP  
+3 P aH bP cM  
+4 H aH bH cP

Enhancements Listing:

Category A:

Terrain providing capability to hide activities from the enemy (1e, 2c, 3b)

Category B:

Capability to provide all-round security (1d, 1f, 3c)  
Capability to prepare and mark routes (1f, 2a)  
Dismounted recon (1f, 2a)  
Natural fighting positions (1d)  
Capability to consolidate and reorganize (4c)

Category C:

Realistic resupply of ammo (1h)

Comments:

Addition of higher resolution terrain providing hide capability would raise task rating to H.

BATTALION TASK FORCE ARTEP 71-2-MTP

DEFEND (7-1-3009)

Task Rating: M

Subtask/Standard Ratings:

1 M aP bH cH dP eP fH gH hP iO jM kN lH mP nH oP pN qH rO sH  
tM  
+2 N aM bN cM dH eN fP  
+3 P aP bH cN dH eP  
+4 H aH bH cP

Enhancements Listing:

Category A:

Obstacles (1a, 1d, 1e, 1i, 1k, 2e, 3c)  
Capability to prepare fighting positions (2a, 2b)

Category B:

Dismounted personnel (1e, 1j, 1m, 1o, 2c, 3e)  
Terrain providing capability to hide activities from the  
enemy (2f, 3a)  
Defilade positions (1h)  
Machine guns (1o)  
ADA assets (1p)  
Engineer assets (1p)  
Capability to consolidate and reorganize (4c)

Category C:

Realistic resupply of fuel and ammo (1t)

Comments:

Addition of obstacles and capability to prepare positions  
would raise task rating to P.

BATTALION TASK FORCE ARTEP 71-2-MTP

PERFORM GUARD (7-1-3020)

Task Rating: P

Subtask/Standard Ratings:

1 H aH bH cH dP eH fP  
+2 P aH bP cN dH eH fP

Enhancements Listing:

Category A:

Obstacles (2c)

Category B:

Dismounted recon (1f)  
Battle positions on terrain (1d)  
MRR(+) or larger OPFOR (2b)  
Brigade-sized friendly element (2f)

Category C: None

Comments:

Addition of obstacles would raise task rating to H.

BATTALION TASK FORCE ARTEP 71-2-MTP

PERFORM INTELLIGENCE OPERATIONS (7-1-3905)

Task Rating: P

Subtask/Standard Ratings:

1 P aH bH cP dP eP  
+2 P aM bP cH dP  
+3 H aH bH cP dH  
+4 M aM bP cN dH

Enhancements Listing:

Category A:

Dismounted recon capability (OPs, patrols) (1c-e, 2d, 4c)  
Dismounted Threat (2a, 2b, 4a, 4b)

Category B:

Obstacles (2a)  
Adjacent units represented in simulation (3c)

Category C: None

Comments:

Addition of dismount capabilities would raise task rating to H.

BATTALION TASK FORCE ARTEP 71-2-MTP

PERFORM AIR DEFENSE OPERATIONS (7-1-3911)

Task Rating: N

Subtask/Standard Ratings:

+1 M aH bM cO

2 H

3 M aN bH cP

+4 N

+5 N

+6 M aH bH cM dM eP fM

+7 N

8 N aN bN cN dN eN

Enhancements Listing:

Category A:

ADA weapons (Stingers, Vulcans) (1c, 4, 5, 6c, 6d, 6f, 7, 8a-e)

Category B:

Capability to take passive air defense measures (1b, 5)

Cover and concealment (3a, 6e)

Machine guns (6c)

Category C:

Camouflage (3a)

Vehicle tracks on terrain (3a)

Open-hatch view (3c)

Comments:

Addition of ADA weapons would raise task rating to H.